Service Manual

75DC1010 / 1B / 2B
75DC1020 / 1A / 2A
Deck / CD Player

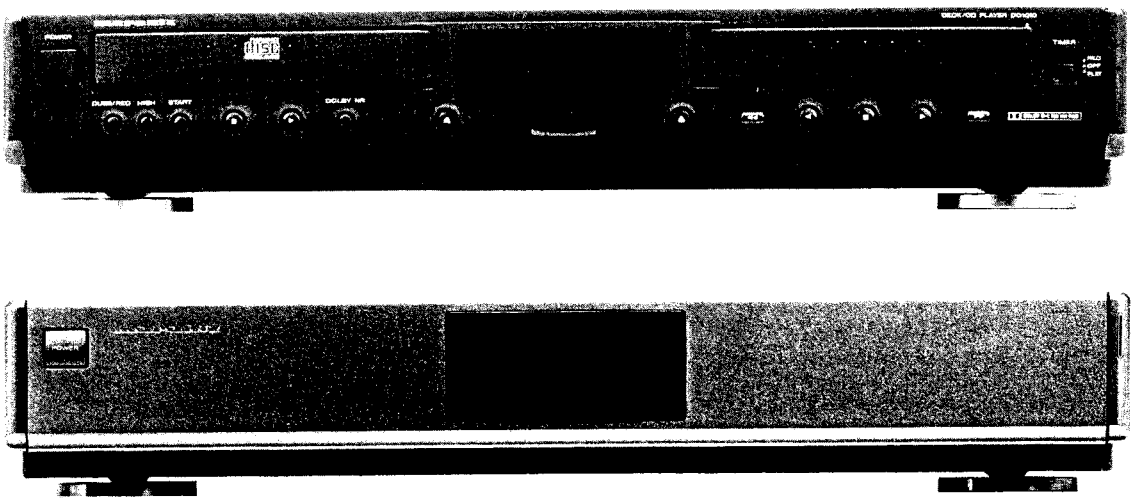


TABLE OF CONTENTS

SECTION		PAGE
1.	TECHNICAL SPECIFICATIONS	1
2.	BLOCK DIAGRAM AND LEVEL DIAGRAM	2
3.	CONNECTION DIAGRAM	4
4.	SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern side)	6
5.	EXPLODED VIEW AND PARTS LIST / DISASSEMBLY	19
6.	TEST EQUIPMENT REQUIRED FOR SERVICING	25
7.	ELECTRICAL ADJUSTMENT	25
8.	MICRO-PROCESSOR DATA AND IC DATA	29
9.	ELECTRICAL PARTS LIST	32

marantz®

model DC1010 / DC1020

4822 725 51076
First issue : 1994 / 10
PCS 79 697

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available at our National Marantz Subsidiary or Agent.

MARANTZ EUROPE B.V.
P.O. Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands
Phone : +31-40-732241
Fax : +31-40-735578

ORDERING PARTS

Parts can be ordered either by mail or by telex. In both cases, the correct part number has to be specified. The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which the part is required
5. Way of shipment
6. Signature: any order form or telex must be signed, otherwise such part order will be considered as null and void.

ADDRESSES

AUSTRALIA
MARANTZ AUSTRALIA
Figtree Drive
Australia Centre
Homebush, NSW 2140
AUSTRALIA

AUSTRIA
MARANTZ
Hietzinger Kai 137a
1130 Wien
Austria

BELGIUM
MARANTZ EUROPE B.V.
Div. Benelux
P.O.Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands

CHILE
MARANTZ DIVISION OF
PHILIPS S.A.
Av.Santa Maria 0760
Casilla 2687
Santiago
Chile

DENMARK
MARANTZ
Horsvinget 5
2630 Tastrup
Denmark

FINLAND
MARANTZ
Kuortanegatan 1
00520
Helsingfors 52
Finland

FRANCE
MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France

GERMANY
MARANTZ GERMANY GmbH
Kleine Heide 12
Postfach 4802
Halle-Westfalen
Germany

GREAT BRITAIN
MARANTZ HiFi UK Ltd.
Kingsbridge House
Padbury Oaks
575-583 Bath Road
Longford Middlesex UB7 OEH,
U.K.

GREECE
ADAMCO ELECTR. SA
P.O.Box 21025
Hippocratus Str. 188
Athens 11471
Greece

ITALY
MARANTZ ITALIANA SPA
Piazza IV Novembre 3
20124 Milano
Italy

JAPAN
MARANTZ JAPAN INC.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan

KUWAIT
AL ALAMIAH ELECTRONICS
P.O.Box 8196
Salmiah
22052 Kuwait

NETHERLANDS
MARANTZ EUROPE B.V.
Div. Benelux
P.O.Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands

NORWAY
MARANTZ
Postboks 7034
Assiden
3007 Drammen
Norway

PORTUGAL
COREL
Av. da Liberdade
211-2 Esq.
1200 Lisboa
Portugal

SAUDI ARABIA
AL ALAMIAH ELECTRONICS
P.O.Box 5954
University Street
Riyadh 11432
Saudi Arabia

SOUTH AFRICA
MARANTZ S.A.
10 Bond Street
Randburg 2194
P.O. Box 7703
Johannesburg 2000
South Africa

SPAIN
MARANTZ SPAIN
Martinez Villergas 2
Apartado 2065
Madrid 28027
Spain

SWEDEN
MARANTZ
Box 1324
17125 Solna
Sweden

SWITZERLAND
MARANTZ SWITZERLAND
Postfach
8010 Zürich-Müllingen
Switzerland

TRADING
MARANTZ TRADING
P.O.Box 20008
Building SFF 2
5600 JB Eindhoven
The Netherlands

All of the above locations are fully equipped to take care of your total service needs or can advice you. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS (DIN)

CD PART:

- Channels ..... 2 channels
- Sampling frequency ..... 44.1 kHz
- Quantization ..... 16-bit linear/channel
- Error correction ..... Cross-interleave read solomon code (CIRC)
- D/A conversion ..... 1-bit linear/channel
- Wow and flutter ..... Precision of quartz

Optical Readout System

- Laser ..... GaAlAs semiconductor
- Wavelength ..... 780 nm

Frequency Characteristics

- Frequency range ..... 10 Hz~20 kHz
- Dynamic range ..... > 93 dB
- S/N ratio ..... > 95 dB
- Channel separation (1 kHz) ..... > 90 dB
- THD (1 kHz) 0.006%
- Analog output jack
  - Output level ..... 2V RMS
  - Output impedance ..... 1 kΩ
- Digital output
  - Optical output ..... –19 dBm

TAPE PART:

- Motor (s) and type ..... 1 DC
- Number of heads 2

Frequency range (3 dB limits–no Dolby NR)

- Type IV (metal) tape ..... 30 Hz~16 kHz
- Type II (CrO_2) tape ..... 30 Hz~16 kHz
- Type I (Fe/Normal) tape ..... 30 Hz~14 kHz
- Signal to noise ratio (CrO_2 tape at 1 kHz) (no Dolby NR/Dolby B and C NR) ..... 58/67/72 dB
- Wow and flatter 0.16%
- Output level/impedance ..... 500 mV/1 kΩ

Power supply

- / 1 version ..... 115 V/230 V AC 50/60 Hz
- / 2 versions ..... 230 V AC 50 Hz
- F version ..... 100 V AC 50/60 Hz
- K version ..... 110 V/220 V AC 50/60 Hz
- U version ..... 120 V AC 60 Hz
- Power Consumption ..... 22 W

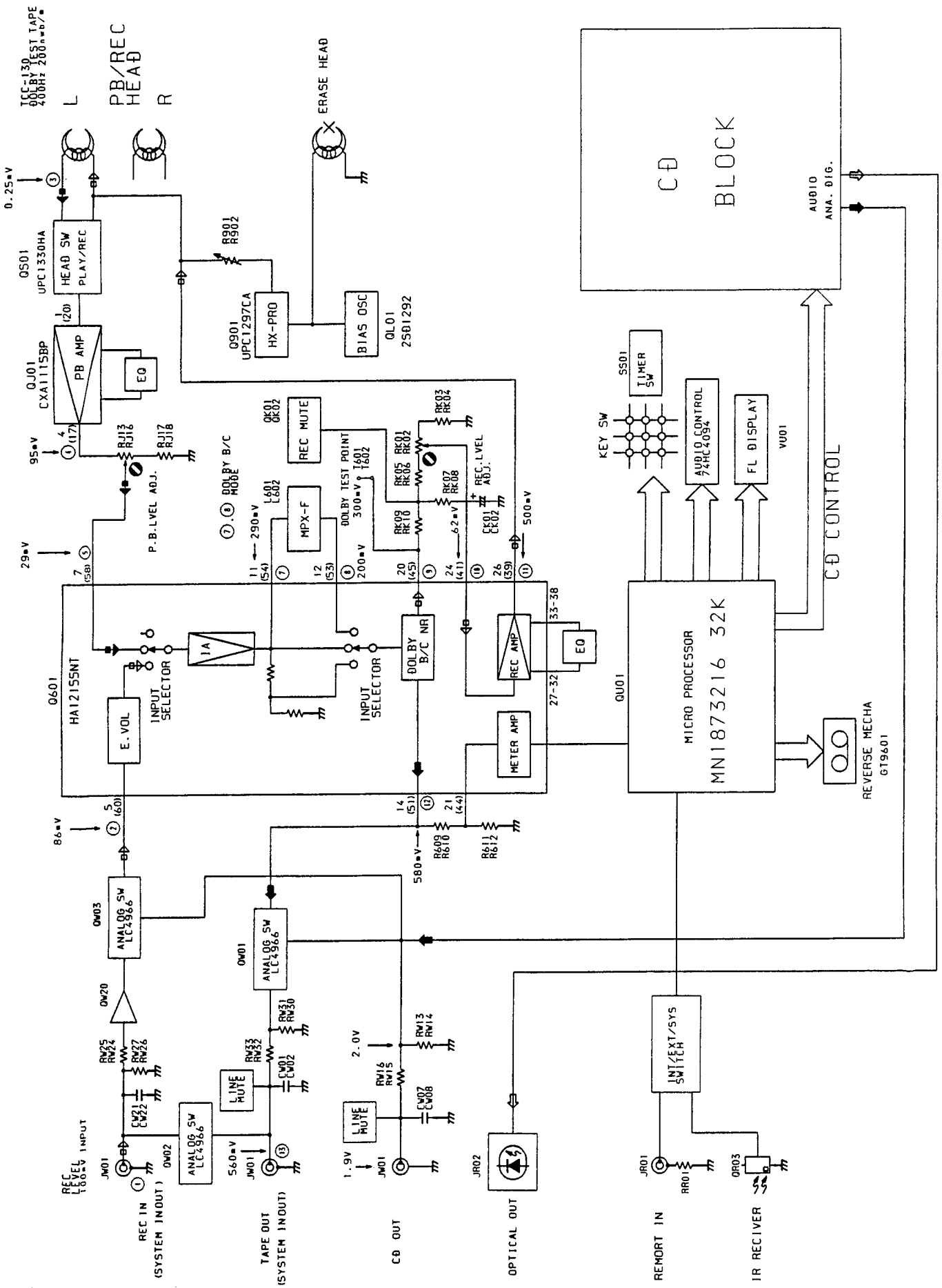
Cabinet, etc.

- Dimensions
  - Width ..... 422 mm
  - Height ..... 76 mm
  - Depth ..... 309 mm
- Net Weight ..... 4.9 kg (DC1010)
  5.0 kg (DC1020)
- Operating temperatures ..... +5~+35
- Operating humidity ..... 5%~90% (without dew)

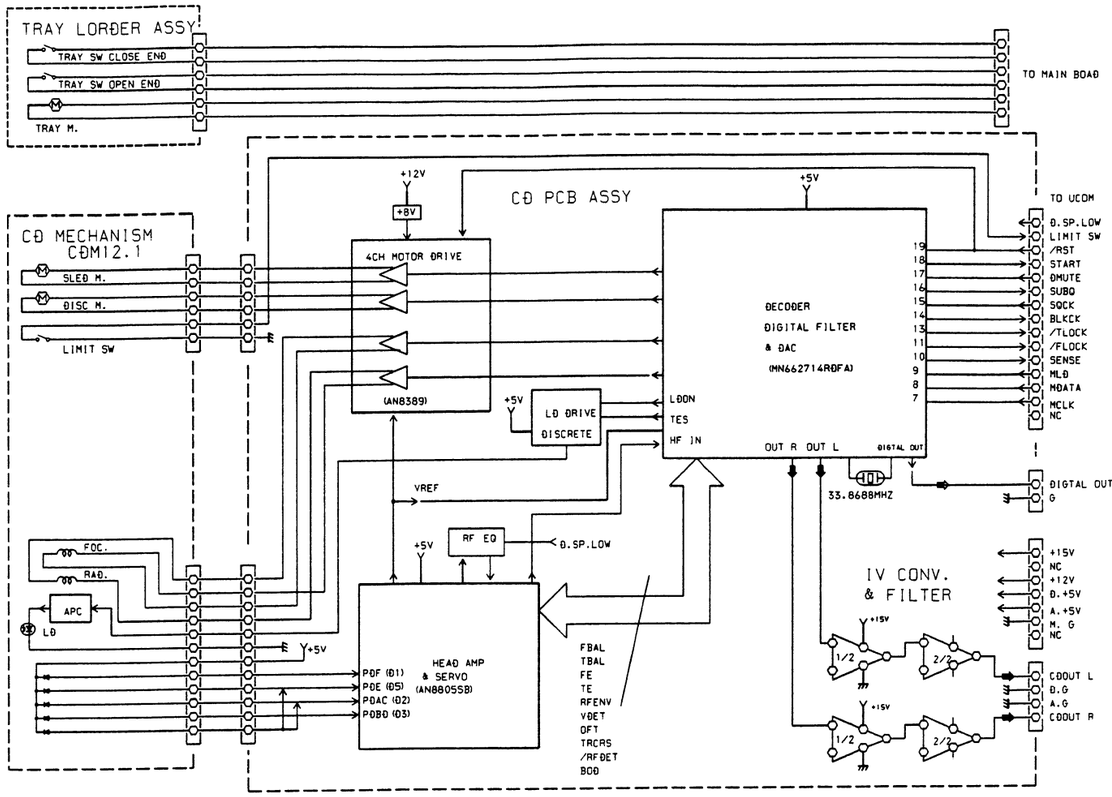
Specifications subject to change without prior notice.

2. BLOCK DIAGRAM AND LEVEL DIAGRAM

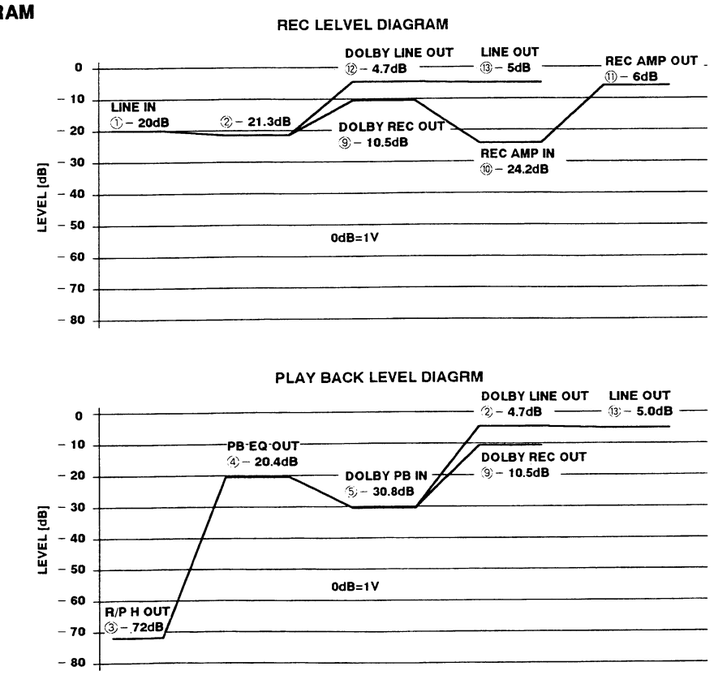
2.1 BLOCK DIAGRAM



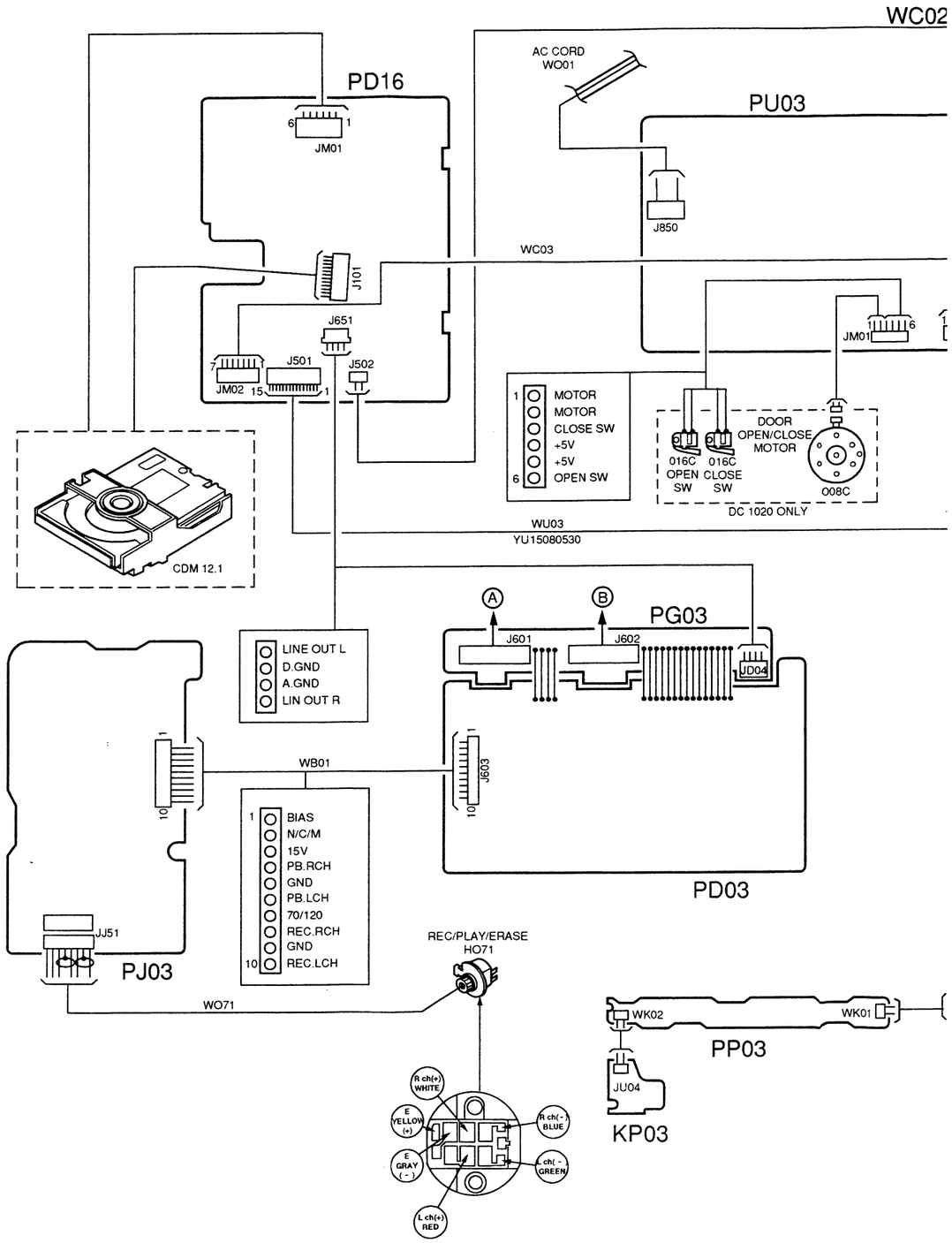
2.2 CD BLOCK DIAGRAM



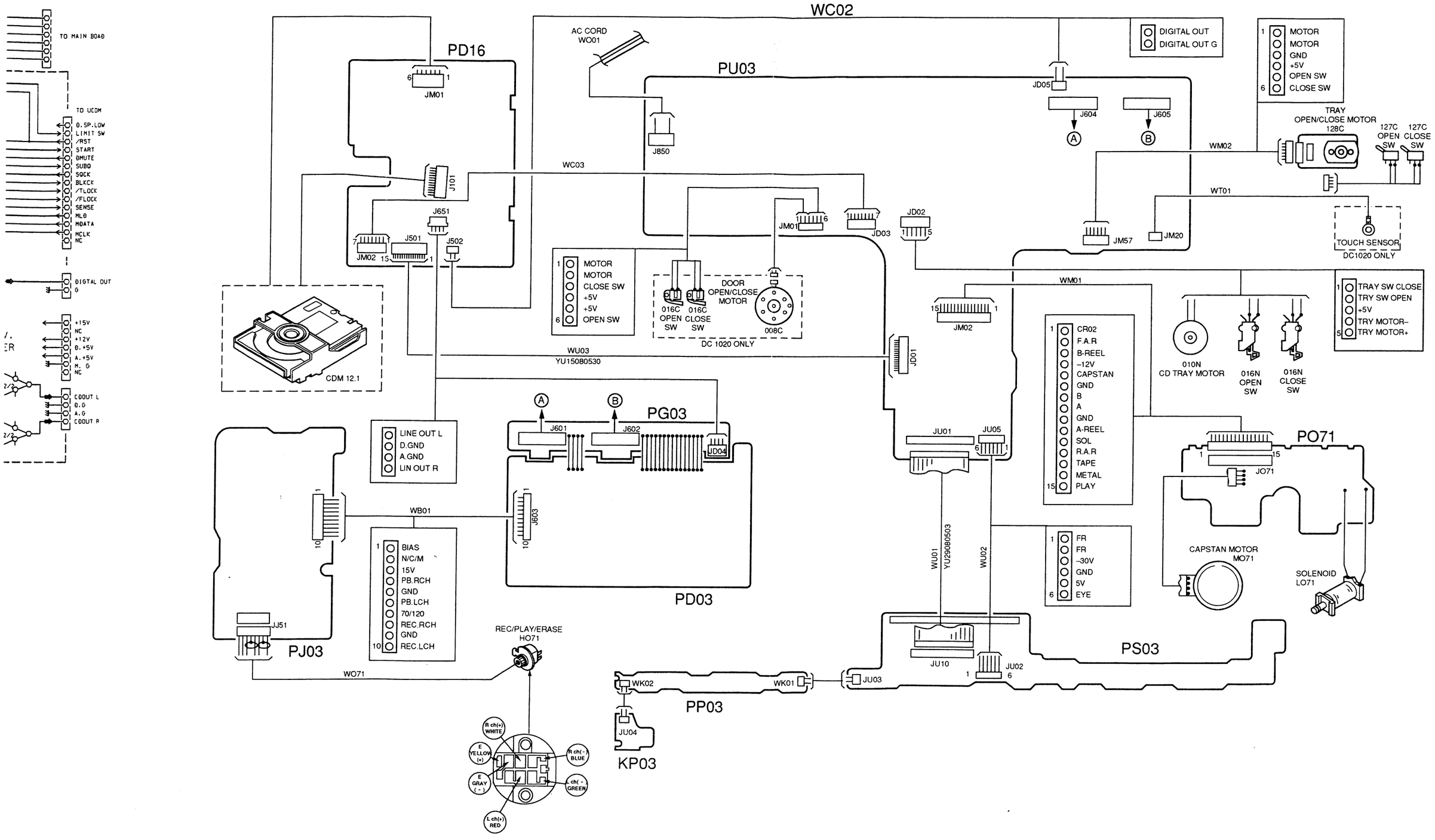
2.3 LEVEL DIAGRAM



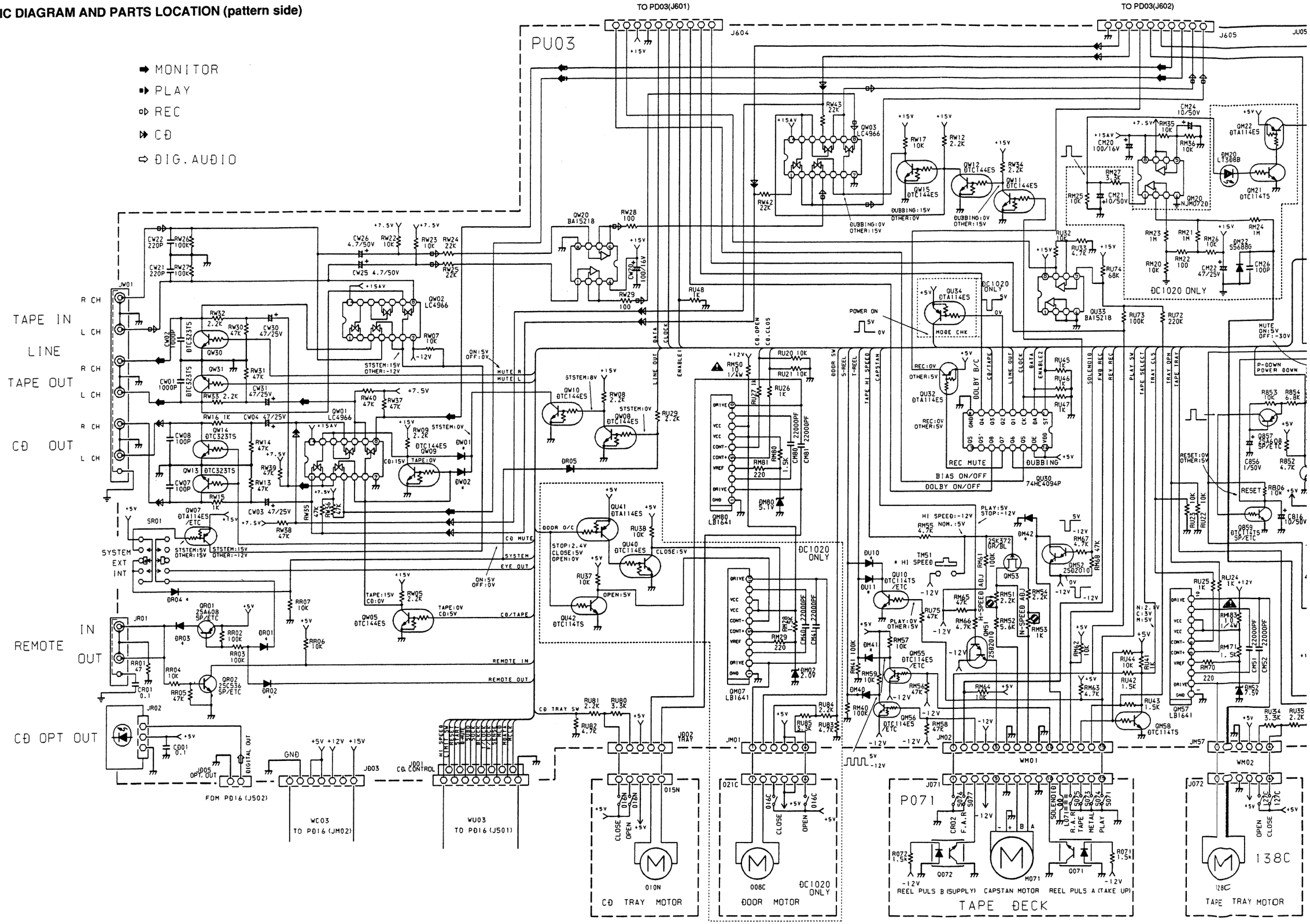
3. CONNECTION DIAGRAM

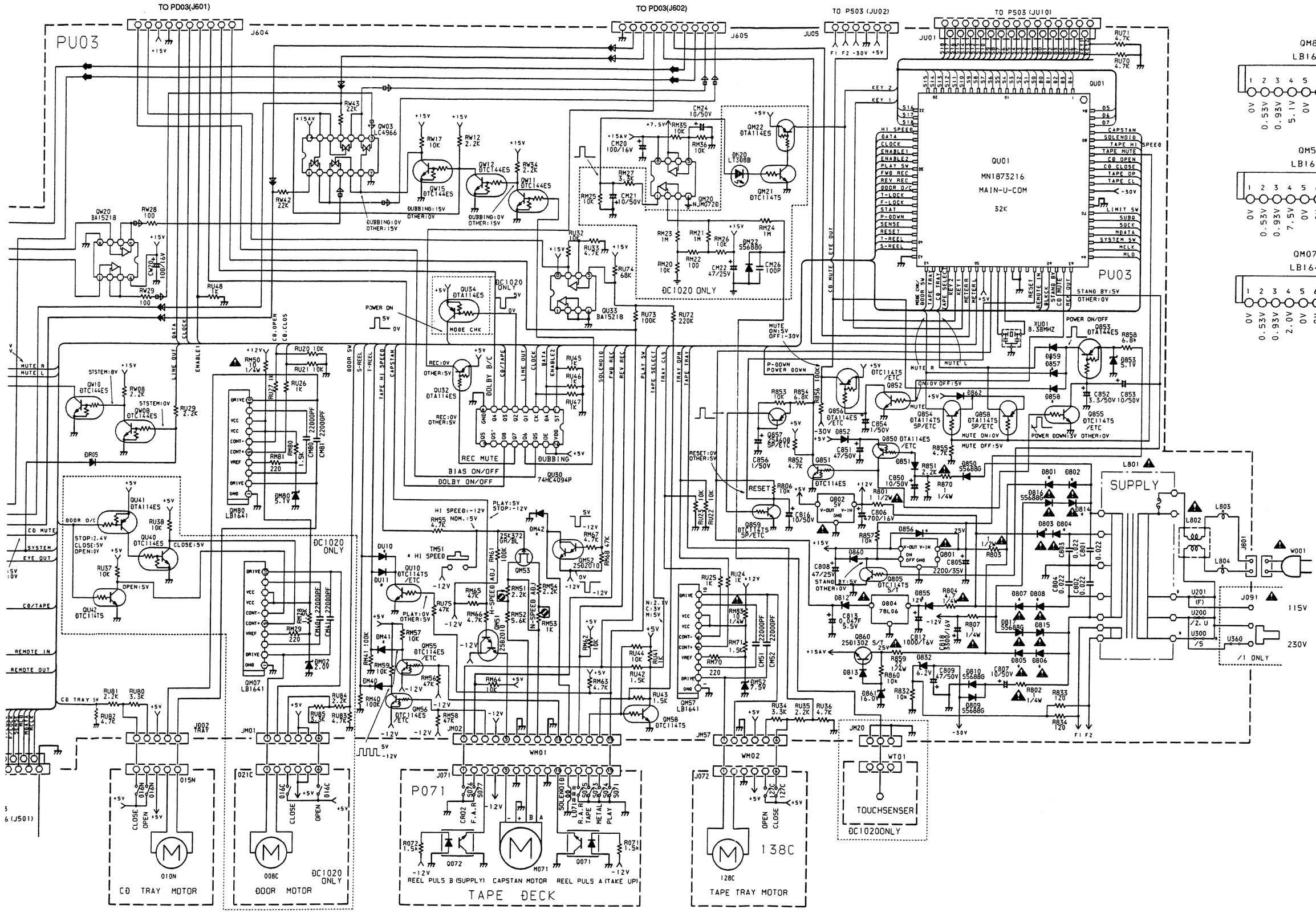


3. CONNECTION DIAGRAM



4. SCHEMATIC DIAGRAM AND PARTS LOCATION (pattern side)





QM80
LB1641

1	2	3	4	5	6	7	8	9	10
0V	0.53V	0.93V	5.1V	0V	0V	12.7V	12.7V	0.94V	0.53V

QM57
LB1641

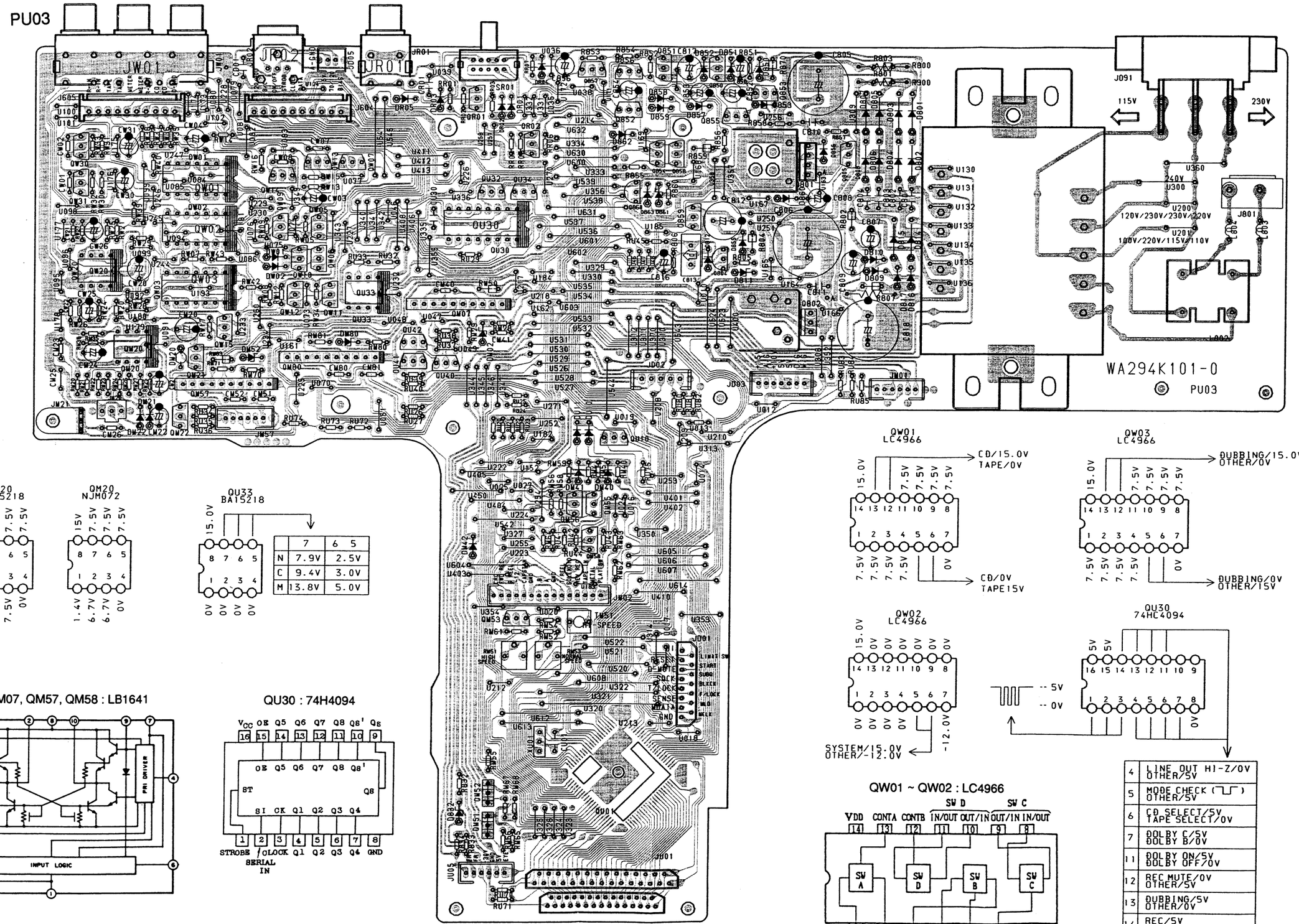
1	2	3	4	5	6	7	8	9	10
0V	0.53V	0.93V	7.5V	0V	0V	12.7V	12.7V	0.94V	0.53V

QM07
LB1641

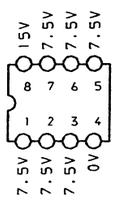
1	2	3	4	5	6	7	8	9	10
0V	0.53V	0.93V	2.0V	0V	0V	12.7V	12.7V	0.94V	0.53V

QW30 QW01~QW03 QW14 QW13 QR01 QR02 Q857 Q856,Q852 Q851 Q850 Q853 Q805
QW31 QM21 QW15 QW09~QW12 QW05 QW07 QM07 QU30 QU32,QU34 QM56 QM55 QU10 Q854 Q855 Q801
QW20 QM20 QM22 QM57 QM80 QW06 QU33 QU40~QU42 QW51~QW53 QM58 QU01 Q858~Q860 Q804 Q802

PU03



QW20
BA15218

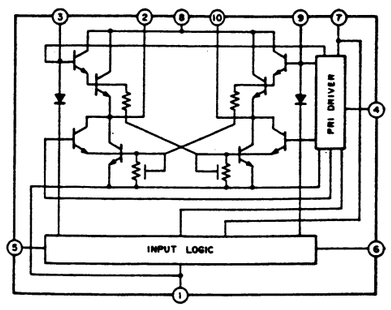


QM20
NJM072

QU33
BA15218

	7	6 5
N	7.9V	2.5V
C	9.4V	3.0V
M	13.8V	5.0V

QM07, QM57, QM58 : LB1641



QU30 : 74H4094

QW01
LC4966

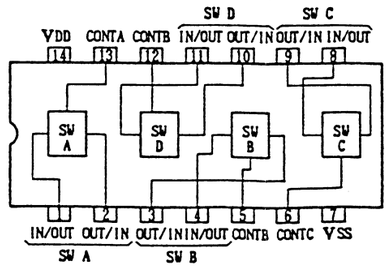
QW03
LC4966

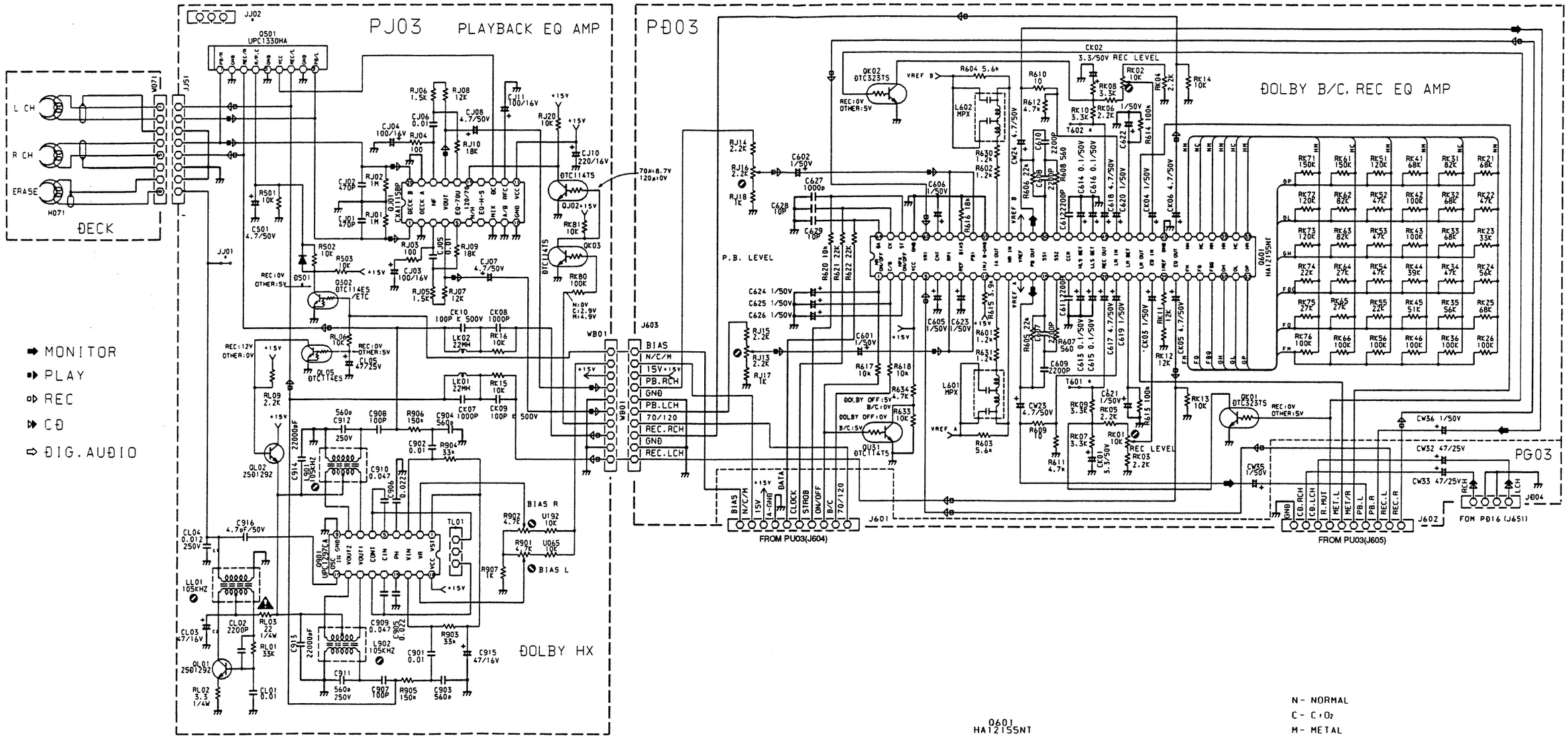
QW02
LC4966

QU30
74HC4094

4	LINE OUT HI-Z/0V OTHER/5V
5	MODE CHECK (⊓⊔) OTHER/5V
6	CD SELECT/5V TAPE SELECT/0V
7	DOLBY C/5V DOLBY B/0V
11	DOLBY ON/5V DOLBY OFF/0V
12	REC MUTE/0V OTHER/5V
13	DUBBING/5V OTHER/0V
14	REC/5V OTHER/0V

QW01 ~ QW02 : LC4966





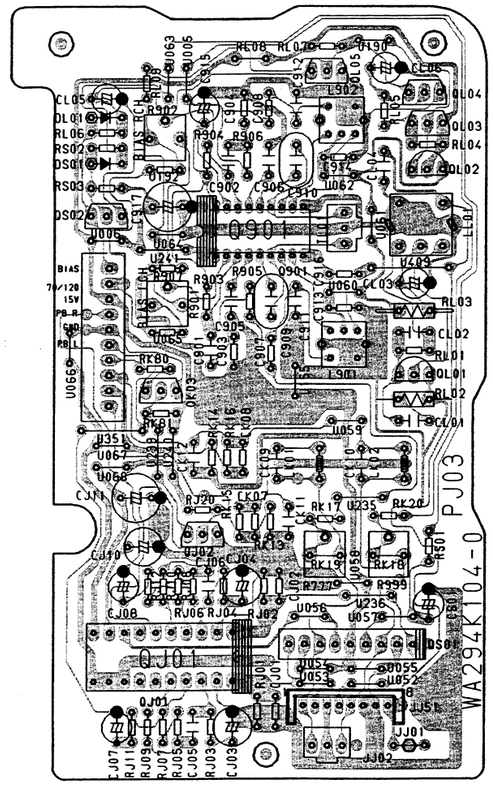
	2 17
N	2.5V
C	2.9V
M	4.4V

	1	2	3
NR OFF	0V	4.9V	4.9V
NR B	4.9V	0V	0V
NR C	4.9V	4.9V	0V

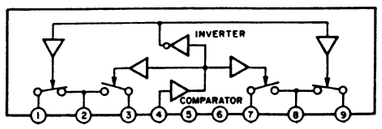
NORMAL SPEED	38	37	36
HIGH SPEED	35	34	33
N	0V	1.27V	1.27V
C	1.27V	0V	1.27V
M	1.27V	1.27V	0V

QS02 Q901 QL05 QL02~QL04
QK03 QJ02 QL01
QJ01 QS01

PJ03



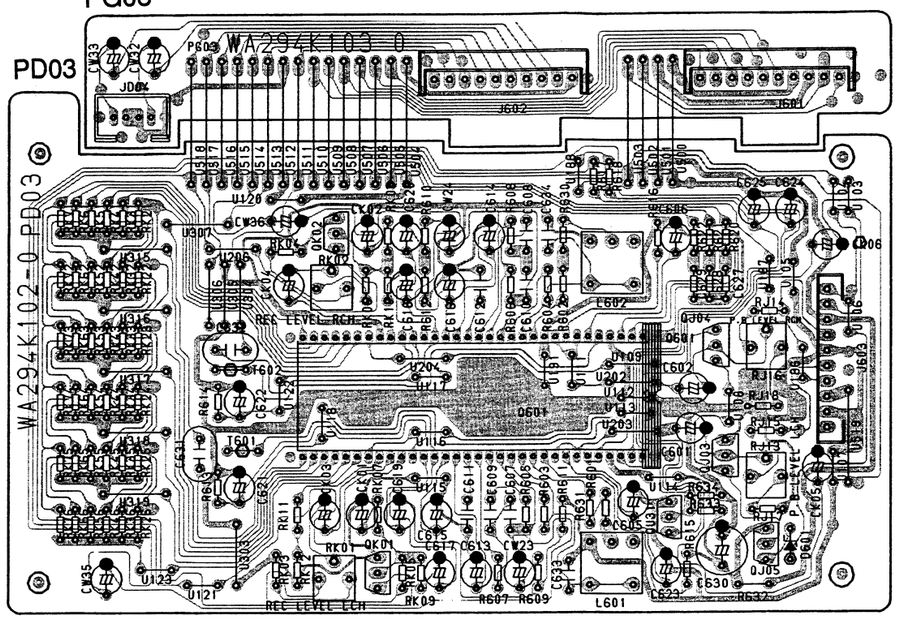
QS01 : µPC1330HA



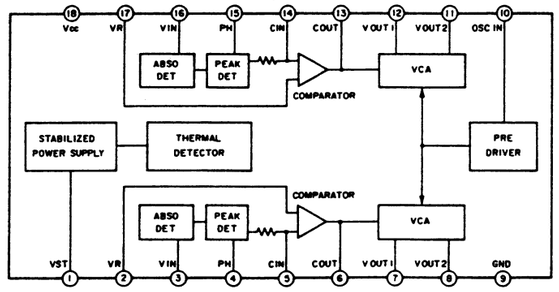
QK02
Q601
QJ04
QK01
QU31 QJ03 QJ05

PG03

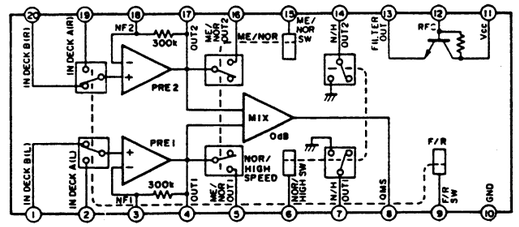
PD03



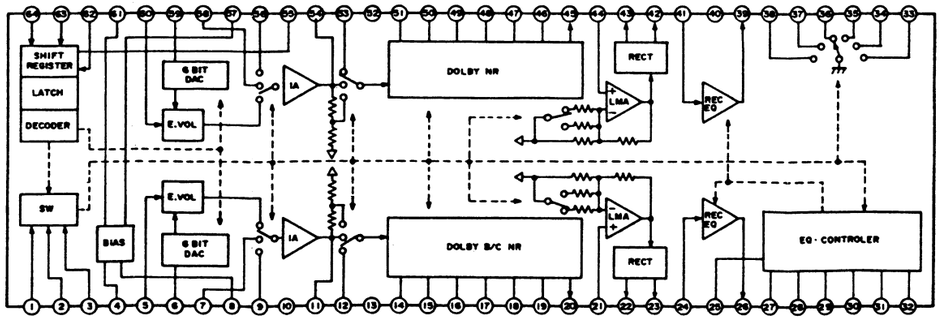
Q901 : µPC1297CA



QJ01 : CXA1115BP



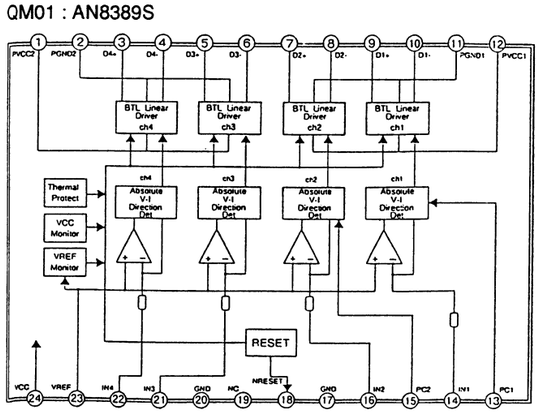
Q601 : HA12155NT



⇨ DIG.AUDIO
➡ ANA.AUDIO
▫▸ HF (RF)
▸▸ FOCUS
▸▸ RADIAL
▸▸ TURNTABLE
▸▸ SLED

CDM 12.1N2T

QM01 : AN8389S



PCS 79 706

VIDE-V18238 / Druck 8

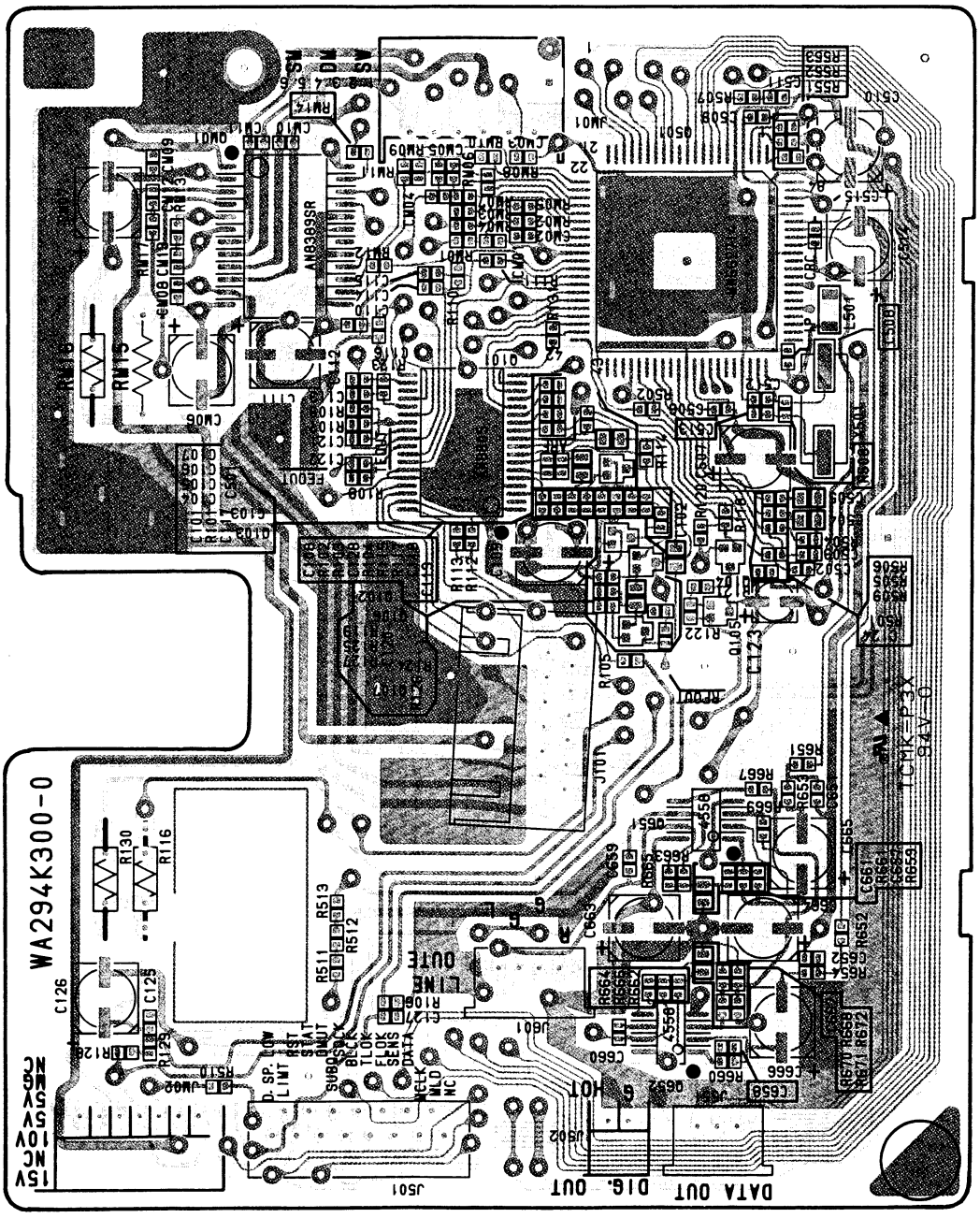
VOLTAGE VALUE IS UNDER CONDITION OF STOP

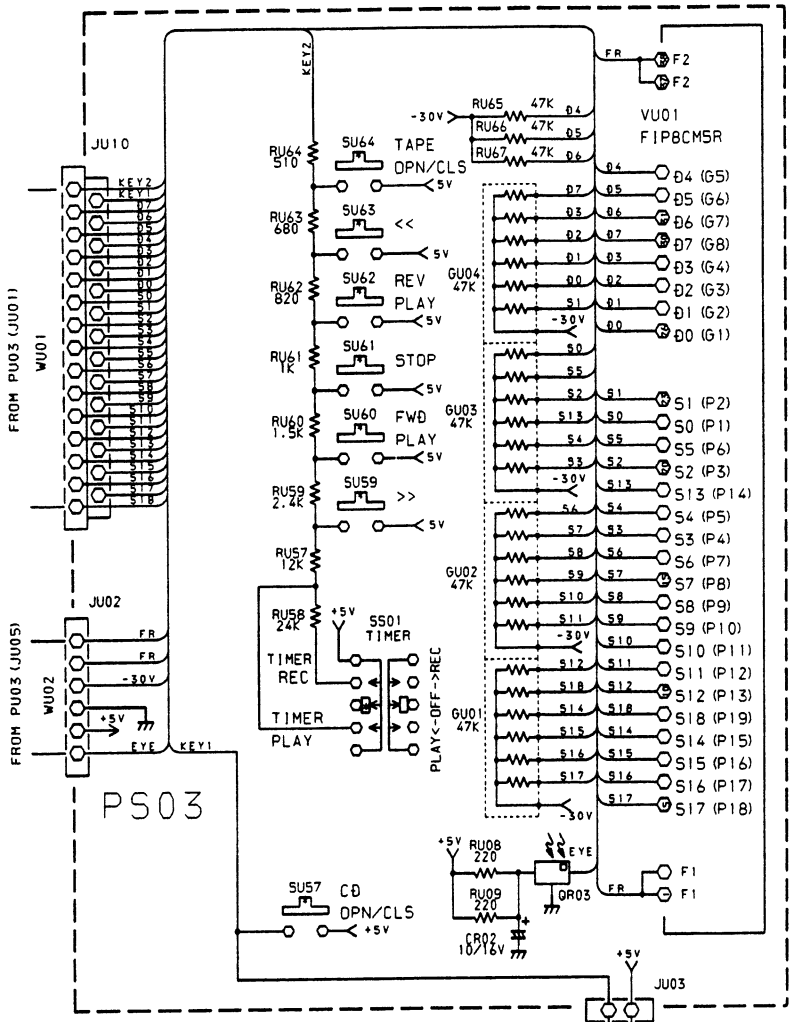
QM01

Q101

Q501 Q106 Q104
Q103 Q107 Q105
Q102 Q652 Q651

PD16





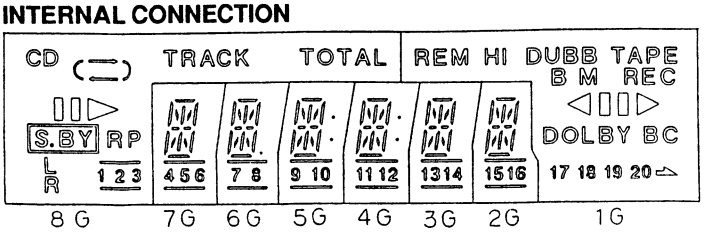
FL DISPLAY

TERMINAL CONNECTION

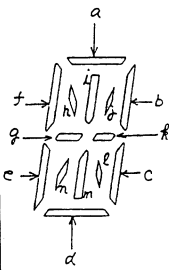
TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ELECTRODE	F	F	NP	NP	P18	P17	P16	P15	P19	P13	P12	P11	P10	P9	P8	P7	P4	P5	P14
TERMINAL NO.		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
ELECTRODE		P3	P6	P1	P2	NP	NP	G1	G2	G3	G4	G8	G7	G6	G5	NP	NP	NP	F	F

Notes F: Filament NP: No Pin
G: Grid
P: Anode

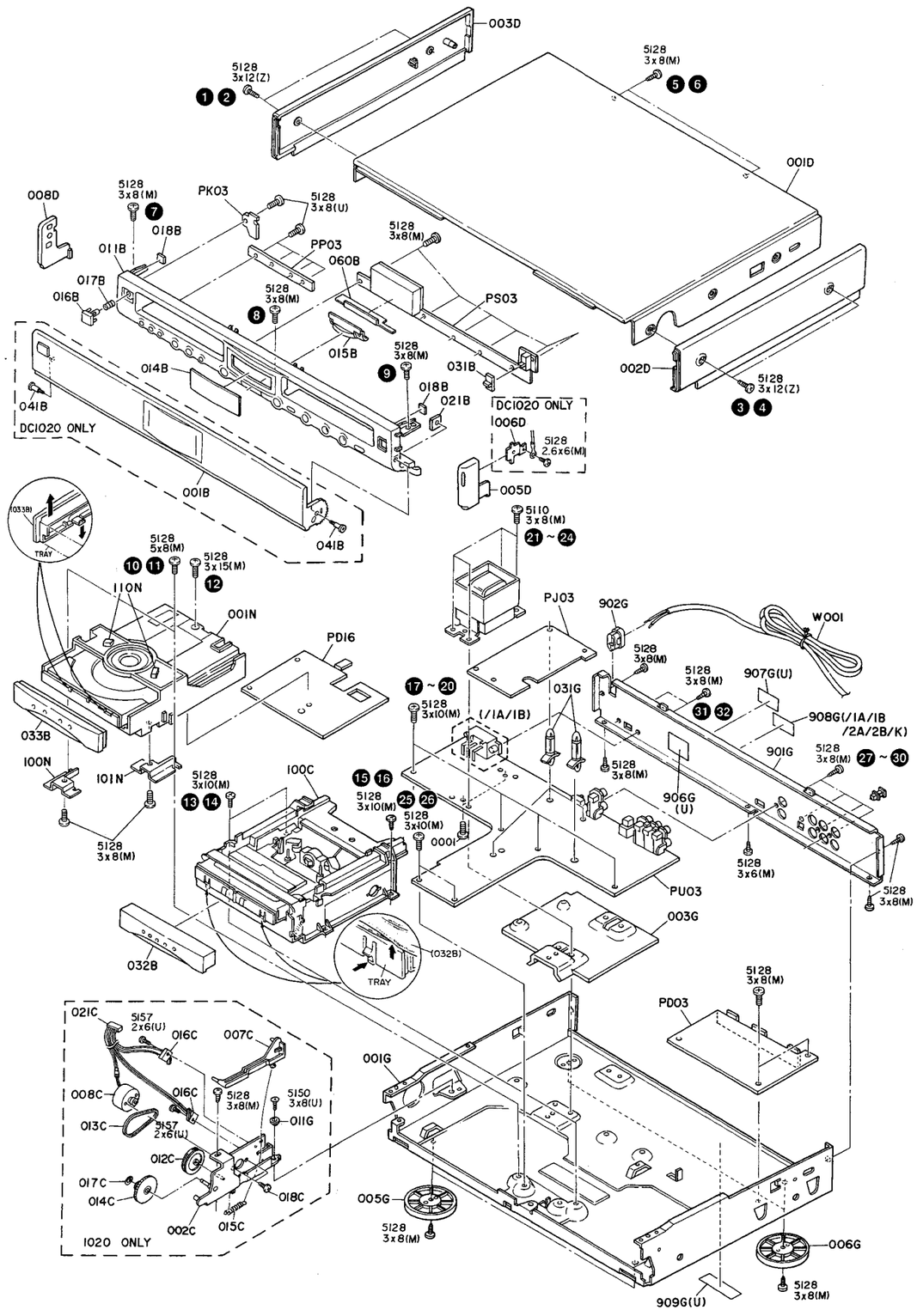
INTERNAL CONNECTION



	8G	7G	6G	5G	4G	3G	2G	1G
P1	CD	a	a	a	a	a	a	REM
P2	(	b	b	b	b	b	b	HI
P3	=	c	c	c	c	c	c	DUBB
P4	)	d	d	d	d	d	d	TAPE
P5	❚❚	e	e	e	e	e	e	B
P6	▶	f	f	f	f	f	f	M
P7	TRACK	g	g	g	g	g	g	REC
P8	TOTAL	h	h	h	h	h	h	◀
P9	S.BY	i	i	i	i	i	i	❚❚
P10	R	j	j	j	j	j	j	▶
P11	P	k	k	k	k	k	k	DOLBY
P12	L(メータ)	l	l	l	l	l	l	B
P13	R(メータ)	m	m	m	m	m	m	C
P14		n	n	n	n	n	n	17
P15	1	4	7	9	11	13	15	18
P16	2	5	8	10	12	14	16	19
P17	3	6	.	:	:			20
P18	((	— (-26)	— (-18)	— (-10)	— (-5)	— (0)	— (+3)	— (+8)	→
P19	((	—	—	—	—	—	—	—	



5. EXPLODED VIEW AND PARTS LIST



[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
001B	GREY	4822 454 21107	ESCUTCHEON, DOOR AL PANEL ASSY [DC1020]	294K063500
001B	PBLACK		ESCUTCHEON, DOOR AL PANEL ASSY (BLACK) [DC1020]	294K063510
011B	BLACK	4822 443 64297	FRONT PANEL ASSY [DC1010]	297K248500
011B	GREY	4822 443 64298	FRONT PANEL ASSY [DC1020]	294K248500
011B	PBLACK		FRONT PANEL ASSY (BLACK) [DC1020]	294K248510
014B			FL WINDOW [DC1010]	294K158110
014B			FL WINDOW [DC1020]	271K158010
015B			IR LENS	271K355010
016B			POWER BUTTON	157J270030
016B	PBLACK		POWER BUTTON (BLACK) [DC1020]	157J270230
017B			POWER BUTTON SPRING	271K115010
018B			MAGNET ASSY [DC1020]	271K305500
021B			NUT [DC1020]	446T011010
031B	BLACK	4822 411 61992	SLIDE KNOB [DC1010]	294K154110
031B	GREY	4822 411 61993	SLIDE KNOB [DC1020]	294K154010
031B	PBLACK		SLIDE KNOB (BLACK) [DC1020]	294K154210
032B	BLACK	4822 454 21105	TRAY ESCUTCHEON FOR ACC [DC1010]	294K063110
032B	GREY	4822 454 21106	TRAY ESCUTCHEON FOR ACC [DC1020]	294K063010
032B	PBLACK		TRAY ESCUTCHEON FOR ACC (BLACK) [DC1020]	294K063110
033B	BLACK	4822 454 30499	TRAY ESCUTCHEON FOR CD [DC1010]	294K063120
033B	GREY	4822 454 30501	TRAY ESCUTCHEON FOR CD [DC1020]	294K063020
033B	PBLACK		TRAY ESCUTCHEON FOR CD (BLACK) [DC1020]	294K063220
041B			SCREW FOR THE DOOR S (ESD) NI [DC1020]	446T010020
060B			INSULATOR ESD	294K120020
001C		4822 522 33389	GEAR ASSY [DC1020]	446T058500
007C		4822 404 21283	LEVER [DC1020]	446T354010
008C		4822 361 21687	D.C.MOTOR ASSY [DC1020]	*MM000630R
012C		4822 528 40363	PULLEY [DC1020]	446T262020
013C		4822 358 31264	BELT [DC1020]	446T264010
014C		4822 522 33388	GEAR [DC1020]	446T058010
015C		4822 492 33411	SPRING [DC1020]	446T115010
016C		4822 271 30768	LEAF SW [DC1020]	SM01011530
017C		4822 462 71954	STOPPER WASHER [DC1020]	204K114210
018C		4822 502 21381	P.H.M. SCREW M1.7 x 2 [DC1020]	51821702U0
100C			TRAY LOADER ASSY	446T163500
001D	BLACK		LID, TOP COVER [DC1010]	157J257110
001D	GREY		LID, TOP COVER [DC1020]	157J257010
001D	PBLACK		LID, TOP COVER (BLACK) [DC1020]	157J257120
002D	BLACK	4822 443 41304	SIDE PANEL (R) [DC1010]	157J249110
002D	GREY	4822 426 30156	SIDE PANEL (R) [DC1020]	157J249010
002D	PBLACK		SIDE PANEL (R) (BLACK) [DC1020]	157J249210
003D	BLACK	4822 443 41305	SIDE PANEL (L) [DC1010]	157J249120
003D	GREY	4822 426 30157	SIDE PANEL (L) [DC1020]	157J249020
003D	PBLACK		SIDE PANEL (L) (BLACK) [DC1020]	157J249220
005D	BLACK	4822 532 21483	BUSHING (R) [DC1010]	206J259010
005D	GREY	4822 532 12253	BUSHING (R) [DC1020]	157J259010
005D	PBLACK		BUSHING (R) (BLACK) [DC1020]	157J259210
006D		4822 281 50181	TOUCH CONTACTOR [DC1020]	157J123010
008D	BLACK	4822 532 21484	BUSHING (L) [DC1010]	206J259020
008D	GREY	4822 532 12254	BUSHING (L) [DC1020]	157J259020
008D	PBLACK		BUSHING (L) (BLACK) [DC1020]	157J259220
005G		4822 462 42067	LEG, FRONT [DC1010]	271K057050
005G		4822 462 42068	LEG, FRONT [DC1020]	271K057110
006G		4822 462 42066	LEG, REAR [DC1010]	271K057020
006G		4822 462 42069	LEG, REAR [DC1020]	271K057120
011G			COLLAR [DC1020]	446T055010
020G			B.H. TAP. SCREW	51280306M0
031G			SCREW FOR R-PANEL BOTTOM CENT	
901G	F		SUPPORT FOR PRO/DOLBY PCB	153J101010
902G	F/K/1	4822 532 61184	REAR PANEL (F)	294K250040
902G	U/2	4822 532 60948	BUSHING	085J259010
001N		4822 691 30353	BUSHING	450H259010
⚠W001	/2	4822 321 10985	MECHANISM, CD LOADER ASSY	305K304510
⚠W001	F/K/1		A.C.POWER CORD	YC01800610
⚠W001	U		A.C.POWER CORD	YC01900160
			A.C.POWER CORD	YC02000540

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
			PACKING	
001S	F		PACKING CASE [DC1020]	294K801010
002S	F		CUSHION (L SIDE)	157J809010
003S	F		CUSHION (R SIDE)	157J809020
001T	F		USER MANUAL [DC1020] (F)	294K851110
001T	U		USER MANUAL [DC1020] (U)	294K851250
001T	K/1/2	4822 736 22228	USER MANUAL [DC1010/1020] MZ-EUR	294K851310
007T	F		WARRANTY CARD JAPAN	9631000150
J011	K/1	4822 265 10092	JACK AC ADAPTER,SMK S-I6116	YJ04001240
W011		4822 321 21438	CONNECTIVE CORD, RCA ST IM	ZD01000330
W012		4822 218 30797	UNIT K, REMOTE COMMANDER RC1020DC	ZK294K0010
W013	F		BATTERY SUM-3NG-2P	ZF23102000
W014		4822 321 62012	CONNECTIVE CORD, RCA	ZD00900100

DISASSEMBLY

1. REMOVING THE TOP COVER AND SIDE PANEL

Remove the screws ❶ ~ ❻.

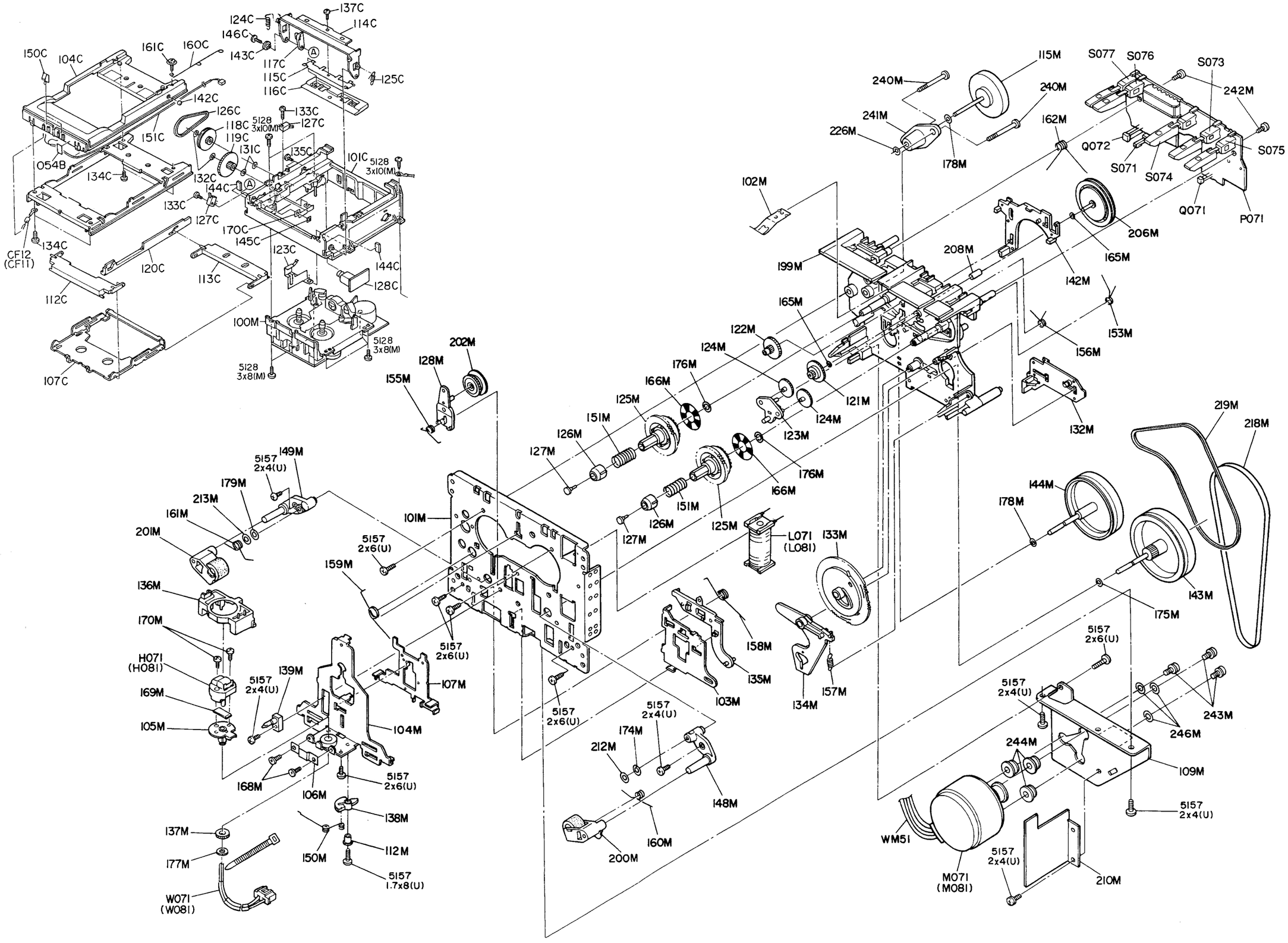
2. REMOVING THE FRONT PANEL

Remove the screws ❼ ~ ❾.

3. REMOVING THE MECHANISM

1) While opening the cassette tray and remove the tray escutcheon (032B) by disengaging two hooks at the bottom side of tray escutcheon.
   Close the cassette tray, then remove the screws ❿ ~ ⓬.

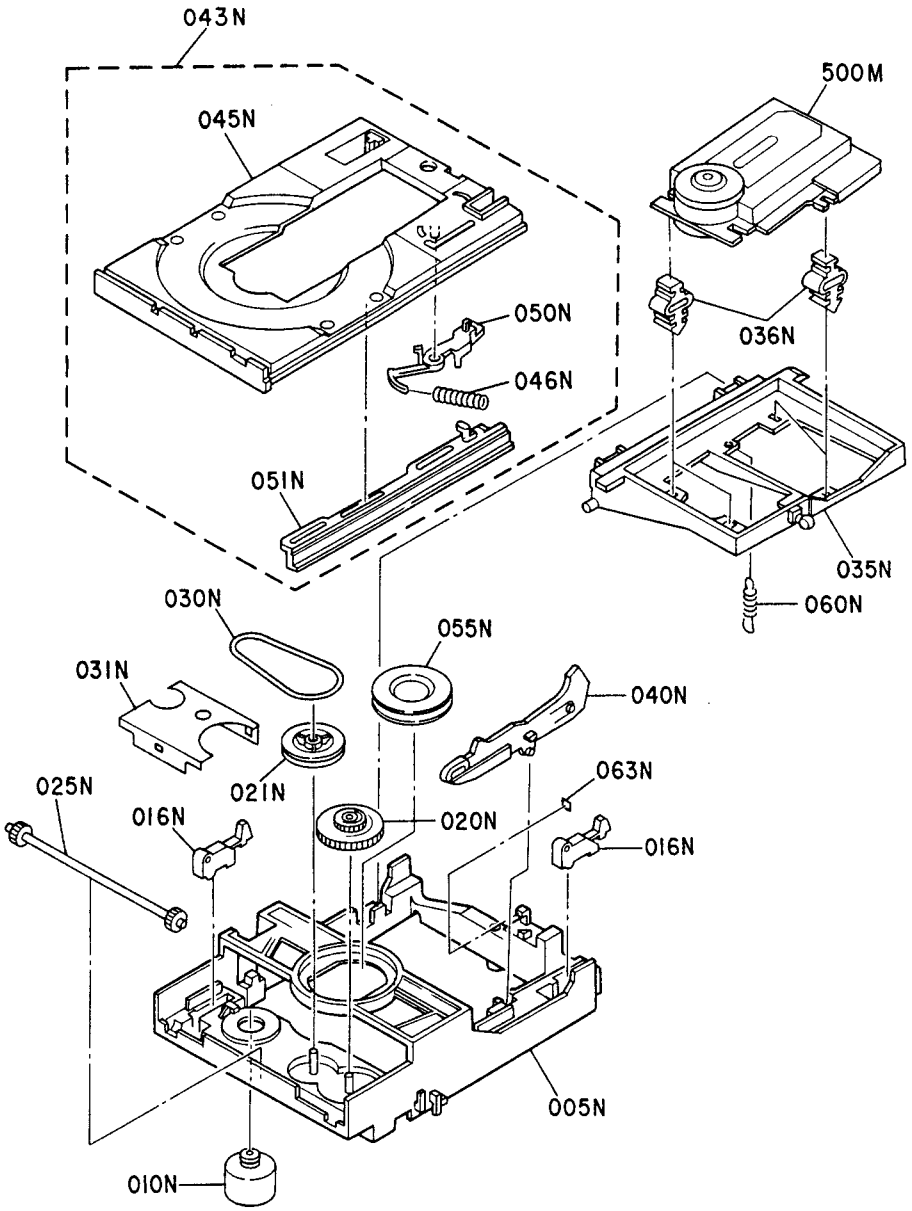
2) While opening the CD tray and remove the tray escutcheon (033B) by disengaging two hooks at the bottom side of tray escutcheon.
   Close the CD tray, then remove the screws ⓭ ~ ⓰.


124C
137C
146C
114C
143C
117C
115C
116C
125C
150C
104C
161C
160C
142C
126C
133C
118C
5128 3x10(M)
127C
151C
119C
131C
135C
101C
5128 3x10(M)
054B
134C
132C
144C
133C
127C
170C
145C
123C
144C
CF12 (CF11)
134C
120C
113C
128C
112C
100M
5128 3x8(M)
5128 3x8(M)
107C
202M
128M
155M
149M
5157 2x4(U)
179M
213M
161M
201M
136M
170M
H071 (H081)
169M
105M
139M
5157 2x4(U)
107M
104M
168M
106M
5157 2x6(U)
138M
137M
177M
150M
112M
5157 1.7x8(U)
W071 (W081)
101M
5157 2x6(U)
159M
5157 2x6(U)
5157 2x6(U)
115M
240M
241M
226M
178M
240M
162M
S077
S076
S073
242M
Q072
S075
S071
S074
Q071
P071
102M
206M
208M
199M
165M
142M
165M
153M
122M
156M
124M
176M
166M
125M
121M
151M
124M
126M
123M
127M
176M
166M
151M
126M
125M
127M
L071 (L081)
133M
158M
135M
103M
134M
157M
5157 2x4(U)
174M
212M
148M
160M
200M
132M
219M
218M
144M
178M
143M
175M
5157 2x6(U)
5157 2x4(U)
243M
246M
244M
109M
5157 2x4(U)
WM51
M071 (M081)
5157 2x4(U)
210M

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
101C		4822 464 50987	FRAME ASSY	446T401500
104C		4822 443 64033	TRAY	446T163210
105C		4822 464 51063	CHASSIS	446T105210
107C		4822 256 92106	HOLDER ASSY	446T271500
112C		4822 403 70979	ARM	446T002210
113C		4822 403 70981	ARM	446T002220
114C		4822 403 70982	ARM)	446T002230
115C		4822 532 40229	RETAINER	446T104210
116C		4822 401 11505	CLAMPER, PLATE	446T005240
117C		4822 403 70983	ARM	446T002240
118C		4822 528 50363	PULLEY	446T262210
119C		4822 522 33397	GEAR	446T058210
120C		4822 522 33398	GEAR	446T058220
123C			CLAMPER, PLATE	446T005250
124C		4822 492 71413	SPRING (01ST20100100)	446T115210
125C		4822 492 71414	SPRING	446T115220
126C		4822 358 31268	BELT	446T264210
127C		4822 277 21716	SLIDE SWITCH	*SS000360R
128C		4822 361 21669	D.C.MOTOR ASSY	*MM000610R
131C			WASHER	446T012210
132C		4822 462 71954	STOPPER WASHER	204K114210
133C		4822 502 21449	SCREW	446T010210
134C			SCREW	446T010220
135C		4822 502 21451	SCREW	446T010230
137C		4822 502 21453	SCREW	446T010250
142C			BALL	61050010T0
143C		4822 532 21487	BUSHING	446T259210
145C			NUT	446T011210
146C			SCREW	446T010260
170C			CLAMPER GROUND PLATE	446T005260
100M			MECHA ASSY, DECK NMZ-9601H	446T304500
101M		4822 464 50917	CHASSIS	435T105110
102M			LEAF SPRING	446T116110
104M		4822 464 50918	HEAD CHASSIS ASSY	435T105120
105M		4822 462 10524	HEAD PLATE ASSY	435T128110
106M		4822 492 71166	LEAF SPRING AZIMUTH	435T116120
115M		4822 528 90875	IDLER PULLEY ASSY	446T001110
121M		4822 522 33278	GEAR, CLUTCH	435T058110
122M		4822 522 33279	GEAR, REW	435T058120
123M		4822 403 70682	ARM, FR	435T002110
124M		4822 522 33281	GEAR, FR	435T058130
125M		4822 522 33282	GEAR, REEL	435T058140
126M		4822 462 71856	CAP. REEL (A)	435T067110
127M		4822 532 21462	BUSHING, REEL (B)	435T259110
128M		4822 403 70683	PLAY ARM	435T002120
133M		4822 522 33283	GEAR, PLAY CAM	435T058160
134M		4822 403 70684	TRIGGER ARM	435T002130
135M		4822 403 70685	SELECT ARM	435T002140
136M		4822 528 81477	GUIDE, TAPE	435T051110
137M		4822 522 33284	GEAR , ROTATION	435T058170
138M		4822 522 33285	GEAR , RETURN	435T058180
139M		4822 403 70688	GUIDE, CASSETTE	435T051120
140M		4822 403 70986	P ROLLER ARM (R)	435T002150
141M		4822 403 70987	P ROLLER ARM (L)	435T002160
142M		4822 403 10304	ARM, BRAKE	435T002170
143M		4822 528 60414	FLYWHEEL (RDH)	446T273110
144M		4822 528 60415	FLYWHEEL (LDH)	446T273120
150M		4822 492 71149	SPRING, RETURN	435T115110
151M		4822 492 71151	SPRING, REEL	435T115120
153M		4822 492 71153	SPRING, CLUTCH ARM	435T115140
157M		4822 492 71157	SPRING, TRIGGER ARM	435T115180
158M		4822 492 71417	SPRING, SHIFT	446T115120
159M		4822 492 71418	SPRING, HEAD CHASSIS	446T115130
160M		4822 492 71161	SPRING, P ROLLER (R)	435T115210
161M		4822 492 71162	SPRING, P ROLLER (L)	435T115220
162M		4822 492 71163	SPRING, BRAKE ARM	435T115230
165M		4822 532 52473	WASHER, POLYSLIDER	435T012110
166M		4822 466 62425	SEAL, REFLECT	446T108110
168M		4822 502 21222	SCREW, AZIMUTH	435T010110
169M		4822 401 11508	CLAMPER, HEAD WIRE	435T005110
170M		4822 502 21223	SCREW, HEAD (RVS)	435T010120
174M		4822 532 52474	WASHER, POLYSLIDER	435T012120
175M		4822 532 52475	WASHER, POLYSLIDER	435T012130
176M		4822 532 52471	WASHER, TEFRON	427T012110
177M		4822 532 52476	WASHER, POLYSLIDER	435T012140
178M		4822 532 52472	WASHER, POLYSLIDER	427T012120

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
179M		4822 532 52477	WASHER, POLYSLIDER	435T012150
191M			P. TAPT. SCREW	51570204U0
193M			TAPPING SCREW	435T010130
194M			TAPPING SCREW	435T010140
199M		4822 464 50992	CHASSIS, MECHA BASE ASSY	446T105500
200M		4822 403 70686	ARM, PINCH ROLLER (R) ASSY	435T002500
201M		4822 403 70687	ARM, PINCH ROLLER (L) ASSY	435T002510
202M		4822 522 33286	PLAY GEAR ASSY	435T058500
206M		4822 528 20754	CLUTCH ASSY	435T061500
212M			NYLON WASHER	446T012120
213M			NYLON WASHER	446T012130
218M		4822 358 31269	BELT, DRIVE (HA)	446T264110
219M		4822 358 31271	BELT, DRIVE (HB)	446T264120
226M		4822 532 52469	WASHER	426T012120
240M			TAP TITE SCREW	446T010110
241M			HOUSING	446T280120
242M		4822 502 30734	TAPPING SCREW	446T010120
243M			SEMS SCREW	446T010130
244M			MOTOR WASHER	446T012110
246M			WASHER	446T012140
H071		4822 249 10469	PLAYBACK HEAD	*LH500020R
L071		4822 281 50172	SOLENOID COIL ASSY	*ME100080R
M071		4822 361 21671	D.C.MOTOR ASSY	*MM000620R
Q071		4822 130 82364	PHOTO UNIT	*HW100020R
Q072		4822 130 82364	PHOTO UNIT	*HW100020R
S071		4822 271 30781	MINI SW, LEAF SW	*SM000250R
S073				
S		4822 271 30779	MINI SW, LEAF SW	*SM000240R
S077				



[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
500M (CDM)		4822 691 30352	MECHANISM, CDM12.1N2T	294K304500
005N			FRAME KIT	305K401500
010N		4822 361 21741	D.C.MOTOR	MM0030002R
016N		4822 271 30853	MINI SWITCH	SM01020620
020N		4822 522 33521	GEAR	305K058030
021N		4822 528 81537	PULLY	305K262010
025N		4822 522 33522	GEAR KIT	305K058500
030N		4822 358 31314	BELT	305K264010
035N		4822 443 51265	CASE	305K064110
036N			BUFFER SUSPENSION	305K056010
040N		4822 403 71209	ARM	305K002010
043N		4822 444 50732	CASE, CD TRAY ASSY	305K064500
045N			CASE, CD TRAY	305K064010
046N			SPRING	305K115010
050N			CAM	305K054010
051N			GEAR	305K058010
055N		4822 401 11553	CLAMPER KIT	305K005500
060N			SPRING	305K115020

◘サービス時に必要な試験機材

● このModelを測定又はチェックするのに次のものが必要です。

○ オーディオ発振器（AF OSC）
○ アッテネータ（600Ω）
○ VTVM
○ 歪率計
○ オシロスコープ
○ ワウ、フラッターメーター
○ トルクメーター（カセット型）
○ デジタル周波数カウンター
○ ブランクテープ
（バルクイレーサーで完全に消去したもの）
AC-224（Normal） AC-712（Metal）
AC-513（CrO_2）

注意：
もし測定値が疑わしい場合は新しいテープを使用してください。

○ テストテープ
TCC-112・MTT-111.....ワウ・フラッタ
テープスピード
TCC-140・MTT-112B.....S/N比
TCC-130・MTT-150.....出力レベル測定
TCC-161・MTT-256.....周波数特性測定（Normal用）
TCC-261・MTT-356.....周波数特性測定（CrO_2/Metal用）
TCC-192・MTT-121.....クロストーク
TCC-194・MTT-141.....チャンネルセパレーション
TCC-174A・MTT-255M.....アジマス調整
(A-BEX)・(TEAC)

○ ヘッドおよびガイドゲージ（M-300）
THG-801.....ヘッド、ガイド調整

◘回路の調整と測定

●調整上の注意点

1) テストテープは減衰しやすいので、使用する前にヘッド、キャプスタン等をイレーサーにて充分に消磁してください。
2) テストテープはトランス内蔵の計測器やイレーサーのすぐ近くには置かないでください。
3) 消磁の方法として、セットからやや離れた所でイレーサーのスイッチを入れヘッド、キャプスタンに近づけ上下に4～5回動かし、ゆっくり離し遠ざけてからスイッチを切ってください。
4) 使用する工具は帯磁していないこと、時々バルクイレーサーで消磁してください。
5) 調整用半固定抵抗及び可変コイル等は、極力最小の回転／回数で調整してください。
6) スピード、ワウ等は、セットの通常の姿勢で調整／チェックしてください。
7) ボンドロックは少量にし、周辺に付着あるいは流れ出ることなど無いよう注意してください。
8) AC電源電圧、オーディオ発振器電圧等は、1日2～3回規定どうりかチェックしてください。

6. TEST EQUIPMENT REQUIRED FOR SERVICING

For measuring or checking your Cassette Deck, the following instruments and materials are necessary.

- Audio Oscillator (AF OSC)
- Attenuator (600Ω)
- VTVM
- Distortion Meter
- Oscilloscope
- Wow and Flutter Meter
- Torque Meter (Cassette Type)
- Digital Frequency Counter
- Blank Tapes (Completely erased with bulk eraser)
  AC-224 (Normal)
  AC-513 (CrO_2)
  AC-712 (Metal)

NOTE:
If any doubt is noted in a measured value, use new tape.

- Test Tape

TCC-112·MTT-111	Wow and Flutter, Tape Speed
TCC-140·MTT-112B	Signal-to-Noise Ratio
TCC-130·MTT-150	Level Adjustment
TCC-161·MTT-256	Frequency Response (for Normal)
TCC-261·MTT-356	Frequency Response (for CrO_2 and Metal)
TCC-192·MTT-121	Cross Talk
TCC-194·MTT-141	Channel Separation
TCC-174A·MTT-255M (A-BEX)·(TEAC)	Azimuth adjustment

- Mirror cassette 12μm padless
  TCC-902·MTT-902 Tape travel check
- Head and guide gauge (M-300)
  THG-801

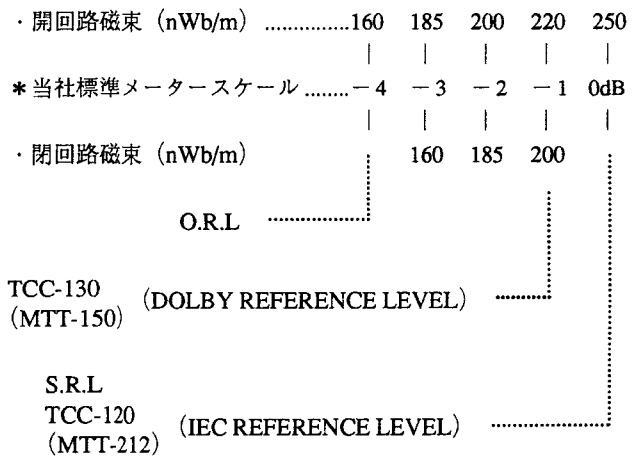
7. ELECTRICAL ADJUSTMENTS

(A) Remark for adjustment

1) Test Tapes damp easily. Erase magnetism of heads and capstans, etc. completely with head erasers before using them.
2) Keep away from measuring instruments have transformer inside and tape eraser.
3) The method of magnetism erase: turn the head eraser on a little away from the sets. Then, close heads and capstans and move up and down 4 - 5 times. Turn them off after making distance slowly.
4) Tools you are going to use should not be magnetized. Erase magnetic them by bulk eraser sometimes.
5) Adjust semi-fixed resistor for adjustment and variable coil, etc. spin and the number of times as less as possible.
6) Adjust and check SPEED and WOW, etc. by normal sets condition.
7) A little bond lock and pay attention to sticking around and flowing.
8) Check AC voltage input and audio Oscillator output voltage 2 - 3 times per day to operate as normal.

●基準録音レベル（S.R.L）

1. テープ上に開回路磁束で、250nWb/mの磁束を記録出来るレベルのことであり、記録レベルとメータースケール及びテストテープの関係は以下のとうりです。



注意：

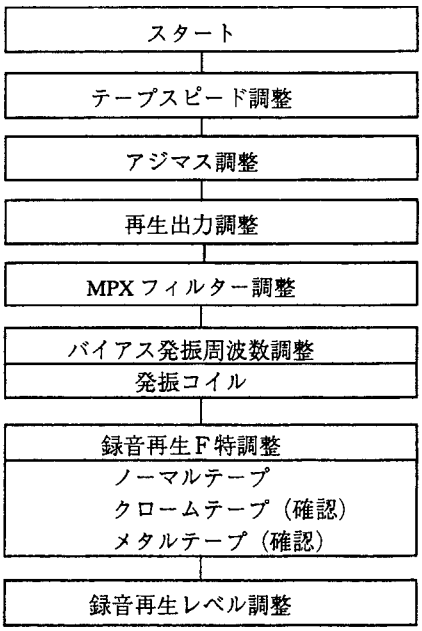
(1) 開回路磁束＝閉回路磁束＋漏洩磁束

2. セットでは通常ドルビーレベルを基準としているので、以下のようになります。
   1) LINE入力に1 KHz、100mVの信号を加え録音状態とします。
   2) REC LEVEL（リモコン）を調整し、ドルビーポイントL) T601, R) T602でのレベルが300mVとなるようにします。
   3) この状態から入力レベルを－4dBとした（アッテネータで4dB下げる）状態がすなわち、動作録音レベル（O.R.L）での録音状態です。

注意：

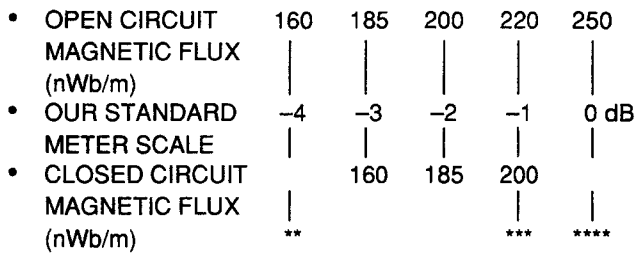
再生の基準レベルはその測定項目により異なり、使用指定のテストテープの記録レベルが基準レベルを決定することになります。

●調整フローチャート



(B) S.R.L/Standard Recording Level

1. S.R.L (Standard Recording Level) which is 250nWb/m on a tape by* OPEN CIRCUIT MAGNETIC FLUX. The relationship among recording level, meter scale and test tape are as follows:

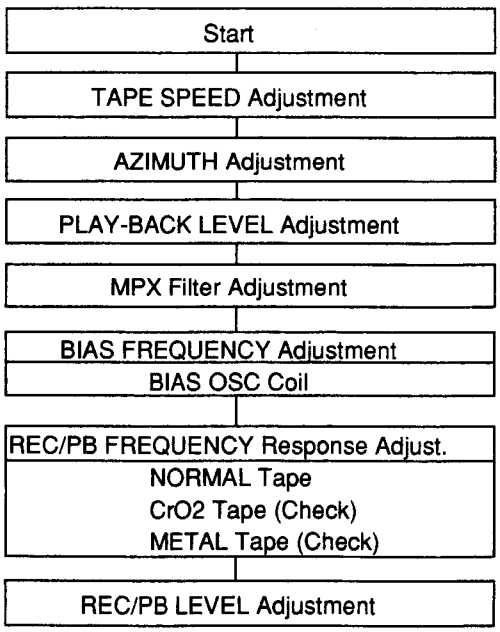

• OPEN CIRCUIT MAGNETIC FLUX (nWb/m) 160 185 200 220 250
• OUR STANDARD METER SCALE –4 –3 –2 –1 0 dB
• CLOSED CIRCUIT MAGNETIC FLUX (nWb/m) 160 185 200
**
***
****

(*): OPEN CIRCUIT MAGNETIC FLUX = CLOSED CIRCUIT MAGNETIC FLUX + LEAK MAGNETIC FLUX.
(**): O.R.L
(***): TCC-130 (DOLBY REFERENCE LEVEL) (MTT-150)
(****): S.R.L TCC-120 (IEC REFERENCE LEVEL) (MTT-212)

2. S.R.L Setting As for sets, DOLBY LEVEL is usually standard, it will be as follows:
1) Recording condition is to add 1 kHz, 100 mV signals on LINE INPUT.
2) Adjust REC LEVEL (REMOTE CONTROL UNIT) and should be 300 mV at DOLBY test points L/T601, R/T602.
3) From this condition, input level is –4 dB (4 dB down by attenuator). It is the recording condition at OPERATION RECORDING LEVEL. (O.R.L)

(Note) Depending on measurement items, playing standard level changes a lot. Recording level of specified test tape decides the standard level.

(C) Adjustment Flow Chart



●テープスピード調整

1) ハイスピードでは基板PU03上のスイッチTM51を押しながら半固定抵抗RM51を調整して6000Hz（5980～6020Hz）になるようにします。
2) 次に、ノーマルスピードでテープ（TCC-112）の中間を再生し、基板PU03上の調整用半固定抵抗RM53を調整して、3000Hz（2990～3010Hz）になるように調整します。
3) 設定後、再度再生して範囲内のことを確認します。

注意：

1. 据置きの姿勢で調整してください。
2. メカニズムが常温と大きく異なる温度状態では、調整しないでください。

●ヘッドアジマス調整／再生F特調整

1) F特テープを再生し、12.5KHzの信号でアジマス調整ビスを回し、締め付け方向で出力最大点に合わせます。
2) L/Rピーク点が違う場合は、低いチャンネルを最大にし、L/Rのバランスを取ります。
3) 調整ビスをボンドロックします。
4) 次に、315Hzの信号を0dBとし、12.5KHzの信号のレベルを読みます。無調整タイプのセットの場合は異常な値でないことを確認します。

7.1 TAPE SPEED ADJUSTMENT

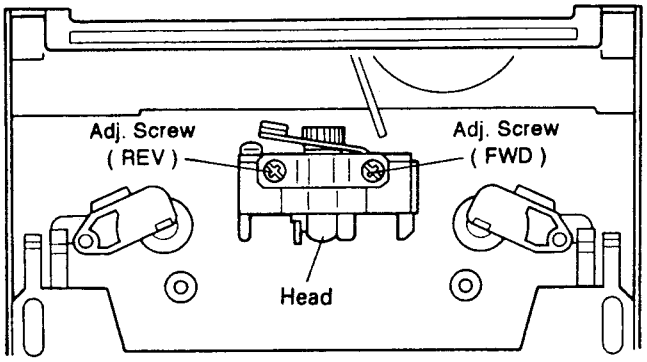
1) Pushing the switch TM51 and adjust semi-fixed resistor RM51 on the PCB (PU03) and to be 6000 Hz (5980 - 6020 Hz).
2) Next, play the middle of the tape in normal speed and adjust semi-fixed resistor RM53 on the PCB (PU03) and to be 3000 Hz (2990 - 3010 Hz).
3) After the set-up, play it again and check within range.

Remarks:

1) Carry them out the set condition.
2) Do not test the mechanism when the condition has a big difference of normal temperature.

7.2 HEAD AZIMUTH ADJUSTMENT AND PLAY-BACK FREQUENCY RESPONSE ADJUSTMENT (OR CHECK)

1) Play the frequency response tape and screw the AZIMUTH adjust screw at 12.5 kHz signal. Then, set output maximum to the screwed-up direction.
2) In case L/R peak point is difference, turn the lower channel maximum, keep the L/R balance.
3) Bondlock adjust screw.
4) Next, 315 Hz signal should be 0 dB and read 12.5 kHz signal level. In case the set is non-adjustment type, check the value whether it is normal.



●再生出力調整

1) ドルビーレベルテストテープを再生し、基板PD03上のテストポイントL) T601，R) T602で、基板PD03上の調整用半固定抵抗L) RJ13，R) RJ16を調整し、それぞれ出力電圧を300mVに合わせる。
2) 調整後再度再生し、再確認する。

注意：

1. 再生出力が変動する場合はテープ走行の不良、又はテストテープの不良が考えられるのでチェックしてください。

●MPXフィルター周波数調整

1) ドルビーレベルで録音モニター状態とし、入力信号周波数が1 KHzの時のレベルを0dBとします。
2) 入力信号周波数を19KHz（±10Hz以内）とし、MPXフィルタースイッチ（DOLBY NR ON）が「ON」の状態でレベルが最小となるよう、基板PD03上のMPXコイルL) L601，R) L602を調整する。
   ＊この調整は、チェッカーで行なうことが好ましい。

注意：

1. 通常は、－40dB以下となります。

7.3 PLAY-BACK LEVEL ADJUSTMENT

1) Play the DOLBY test tape, adjust semi-fixed resistor for adjustment L/RJ13, R/RJ16 on the PCB (PD03) at test point L/T601, R/T602 on the PCB (PD03). Then, set output voltage to 300 mV each of them.
2) After adjustment, replay and check it again.

Remark:

1) In case of drifting replay output, check the tape running and the test tape because it might be defective.

7.4 MPX FILTER ADJUSTMENT

1) Should be recording monitor by DOLBY LEVEL. Input signal level is 0 dB at 1 kHz.
2) Input signal frequency is 19 kHz (within ±10Hz). Adjust MPX coil L/L601, R/L602 on the PCB (PD03). Then MPX-F switch should be "ON" and the level is minimum.

Remark:

1) It is under –40 dB as usual.

●録音バイアス周波数及びHXコイル共振調整

1) 「METAL」ポジションで録音状態とします。
2) 基板PJ03上のテストポイントJJ01に10PFのコンデンサを介して測定器に接続します。(周波数カウンター及びオシロスコープ)
3) バイアス発振周波数を105KHzとなるよう基板PJ03上の発振コイルLL01を調整します。
4) 次にHXコイルL) L901, R) L902を調整し、テストポイントTL01 (L, R)出力の最小点に合わせます。

●録音再生F特調整

1) 基準録音レベルから入力レベルを更に－25dB減じ、1 KHzと12.5KHzの信号をDOLBY-Cポジションで録音します。(NORMALテープ／ACC224)
2) 巻き戻し再生し、1 KHzと12.5KHzの信号のレベル差が0～＋1.0dBとなるよう、基板PJ03上の調整用半固定抵抗 L) R901, R) R902を調整します。
3) CrO_2、METALでは確認のみを行ないます。

●録音再生レベル調整

1) NORMALテープ／ACC224にて動作録音状態とし、モニターレベルを0dBとします。
2) 巻き戻し再生し、1 KHzのレベルが±0.5dB以内となるよう、PD03基板上の調整用半固定抵抗 L) RK01, R) RK02を調整します。
3) CrO_2、METALでは1 KHzで±1 dB以内であることの確認のみを行ないます。

7.5 RECORDING BIAS FREQUENCY AND HX COIL ADJUSTMENT

1) Operate to REC mode at METAL position.
2) High impedance through test point JJ01 on the PCB (PJ03) and connect to measurement. (FREQUENCY COUNTER and OSCILLOSCOPE through AUDIO VOLT METER)
3) Adjust a bias-oscillated coil LL01 on the PCB (PJ03) to be 105 kHz bias-oscillated frequency.
4) Then, adjust HX coil L/L901, R/L902 to minimum the output at test point TL01 (L/R).

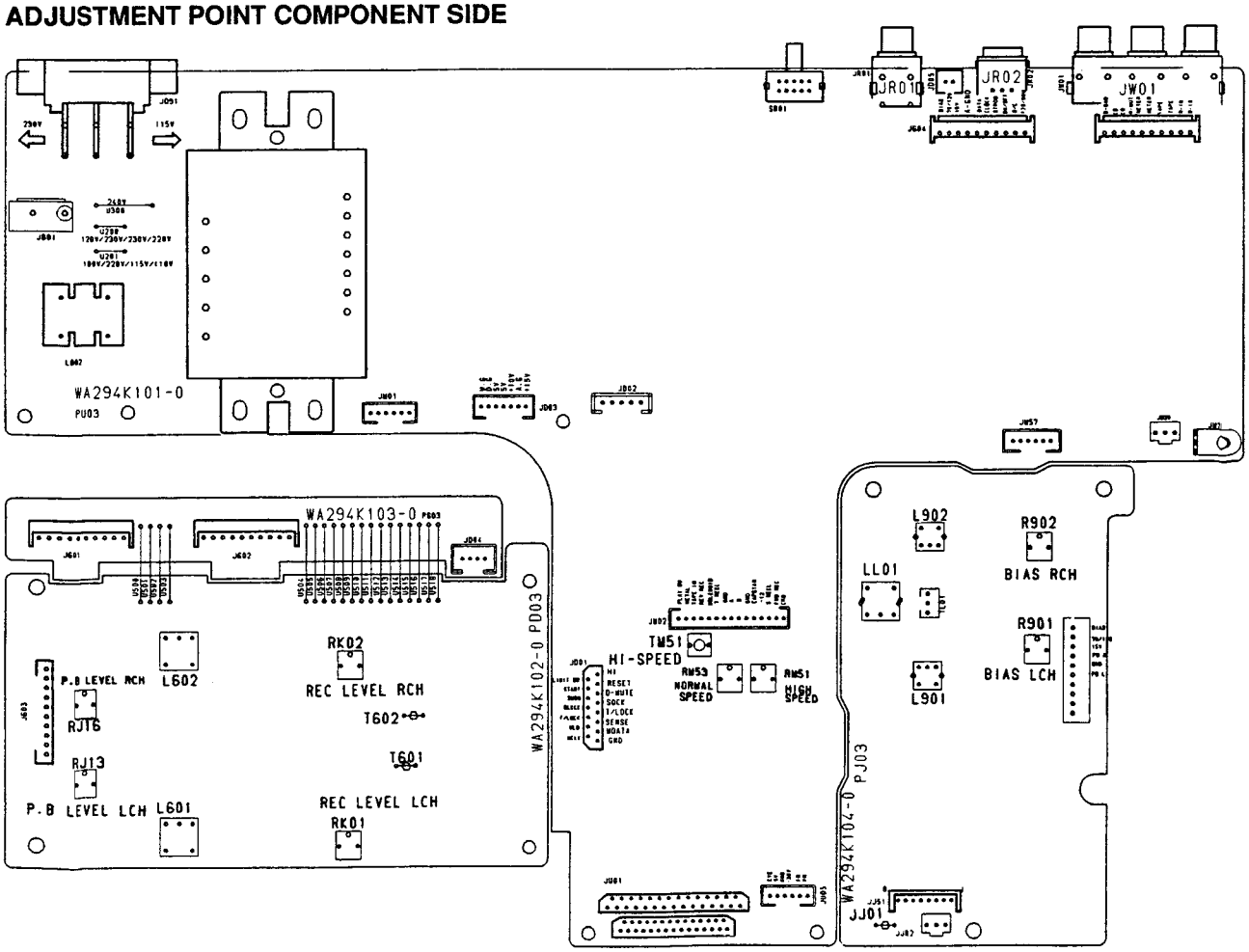
7.6 REC/PLAY-BACK FREQUENCY RESPONSE ADJUSTMENT

1) Decrease -25 dB INPUT LEVEL from S.R.L setting. Record 1 kHz and 12.5 kHz signals at DOLBY-C position. (NORMAL tape/position)
2) Adjust semi-fixed resistor L/R901, R/R902 on the PCB (PJ03) that the level of differences 1 kHz and 1.25 kHz should be 0 ~ +1.0 dB.
3) Only check CrO_2 and METAL tapes/positions.

7.7 REC/PLAY-BACK LEVEL ADJUSTMENT

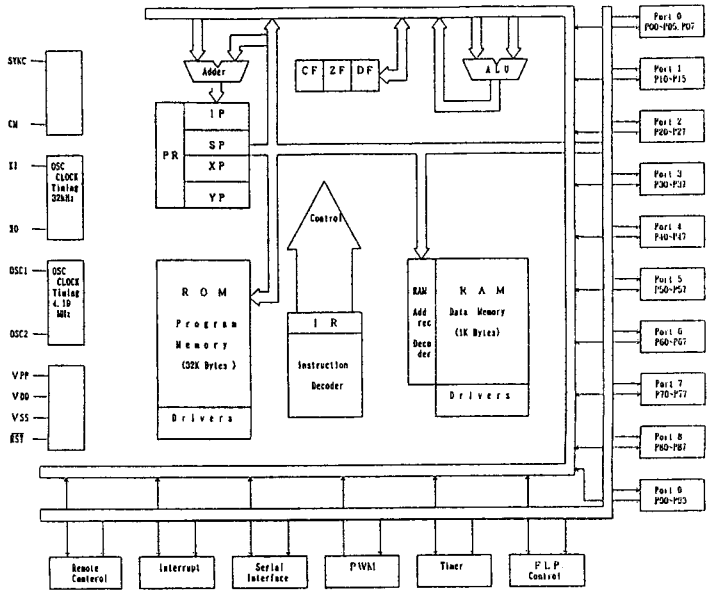
1) By NORMAL tape/position, set O.R.L setting and set monitor level scale 0 dB.
2) Do REWIND and PLAY it and adjust semi-fixed resistor L/RK01, R/RK02 on the PCB (PD03) to be 1 kHz level within ±0.5 dB.
3) Only check CrO_2 and METAL tapes/positions. In these case, to be 1 kHz level within ±1.0 dB.

ADJUSTMENT POINT COMPONENT SIDE

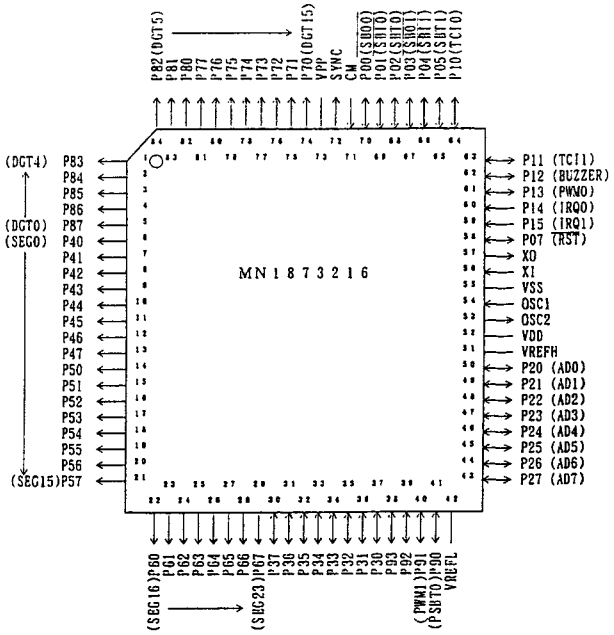


8. MICRO-PROCESSOR DATA AND IC DATA

MN1873216 (MICROPROCESSOR)



MN1873216 BLOCK DIAGRAM

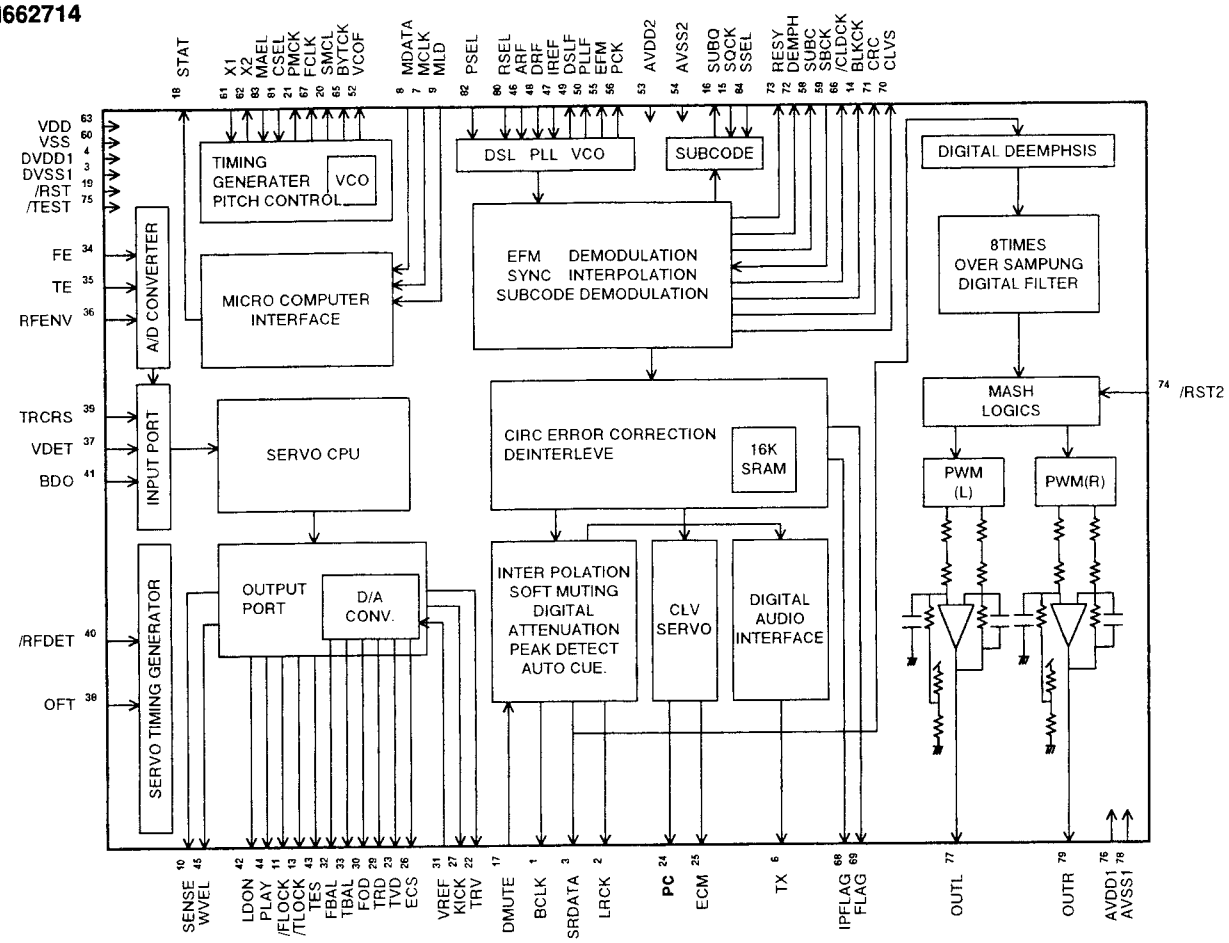


(TOP VIEW)

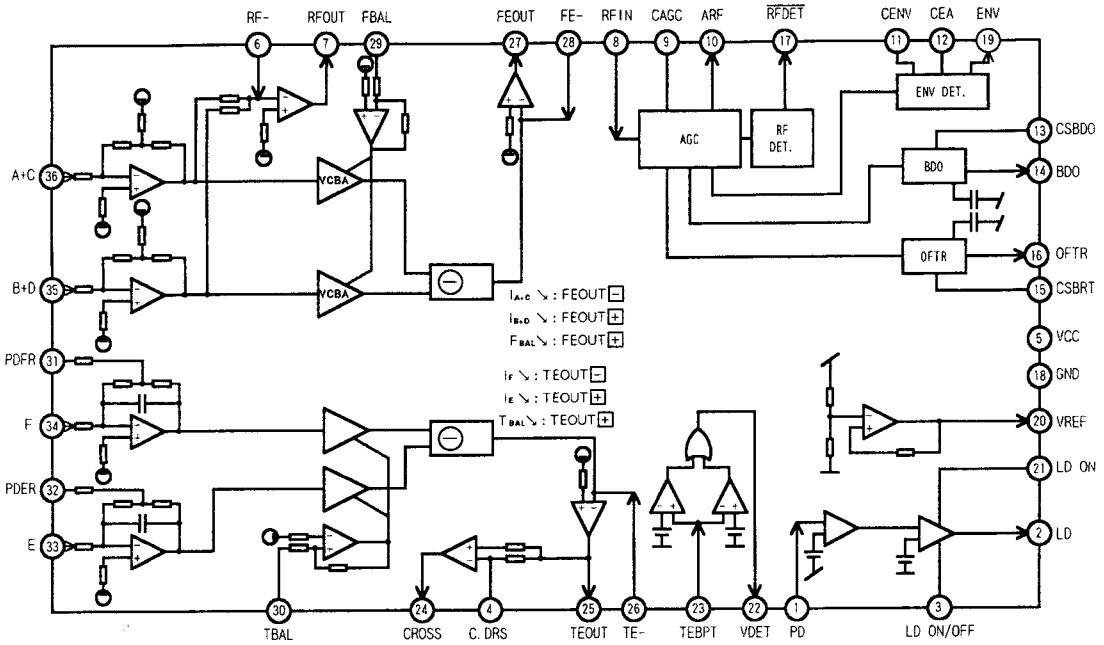
PIN NO.	PORT NAME		I/O	ACT	FUNCTION
1	P83	D4(G5)	O	H	FL DISPLAY DIGIT DRIVE
2	P84	D3(G4)			
3	P85	D2(G3)			
4	P86	D1(G2)			
5	P87	D0(G1)			
6	P40	S0(P1)	O	H	FL DISPLAY SEGMENT DRIVE
7	P41	S1(P2)			
8	P42	S2(P3)			
9	P43	S3(P4)			
10	P44	S4(P5)			
11	P45	S5(P6)			
12	P46	S6(P7)			
13	P47	S7(P8)			
14	P50	S8(P9)			
15	P51	S9(P10)			
16	P52	S10(P11)			
17	P53	S11(P12)			
18	P54	S12(P13)			
19	P55	S13(P14)			
20	P56	S14(P15)			
21	P57	S15(P16)			
22	P60	S16(P17)			
23	P61	S17(P18)			
24	P62	S18(P19)			
25	P63	CD HI SPEED	O	L	LOW:CD HI SPEED HI:NORMAL
26	P64	DATA	O	P	DOLBY, 74HC4094 CONTROL DATA
27	P65	CLOCK	O	P	DOLBY, 74HC4094 CONTROL CLOCK
28	P66	ENABLE 1	O	H	ENABLE FOR DOLBY IC
29	P67	ENABLE 2	O	H	ENABLE FOR 74HC4094
30	P37	PLAY SW	I	L	LOW:PLAY HIGH:STOP
31	P36	FWD REC	I	L	LOW:FWD REC HIGH:ANTI REC
32	P35	REV REC	I	L	LOW:REV REC HIGH:ANTI REC
33	P34	DOOR OPEN/CLOSE	O	→	5V:OPEN 0V:CLOSE 2.5V:STOP
34	P33	T – LOCK	I	L	TRACKING SERVO LOCK SIGNAL
35	P32	F – LOCK	I	L	FOCUS SERVO LOCK SIGNAL
36	P31	STAT	I	P	STATUS SIGNAL
37	P30	POWER DOWN	I	L	POWER OFF DETECT
38	P93	SENSE	I	P	SENSE SIGNAL INPUT
39	P92	CD RESET	O	L	CD RESET
40	P91	T – REEL	I	P	TAKE UP REEL PULS
41	P90	S – REEL	I	P	SUPPLY REEL PULS
42	VREFL	AVREF L	–	–	AD CONVERTER REFERENCE VOLTAGE 5V

PIN NO.	PORT NAME		I/O	ACT	FUNCTION
43	AD7	DOOR SW /MODE-CHK	I	DC	OPEN:2.3V CLOSE:3.4V OTHER:0V /DC1020
44	AD6	TAPE TRAY SW	I	DC	OPEN:2.3V CLOSE:3.4V OTHER:0V
45	AD5	CD TRAY SW	I	DC	OPEN:2.3V CLOSE:3.4V OTHER:0V
46	AD4	TAPE SELECT	I	DC	METAL:5V CrO2:3.0VNORMAL:1.9V
47	AD3	KEY B	I	DC	KEY SW
48	AD2	KEY A	I	DC	KEY SW
49	AD1	METER R	I	DC	LEVEL METER R CH
50	AD0	METER L	I	DC	LEVEL METER L CH
51	VREF H	AV REF H	–	–	AD CONVERTER REFERENCE VOLTAGE+5V
52	VDD	VDD	–	–	VDD +5V
53	OSC2	OSC2	–	–	MAIN CLOCK 8.38MHZ
54	OSC1	OSC1	–	–	MAIN CLOCK 8.38MHZ
55	VSS	VSS	–	–	VSS GND
56	XI	XI	–	–	N.C.
57	XO	XO	–	–	N.C.
58	$\overline{RES}$	RESET	I	L	μ – PROCESSOR RESET
59	IRQ1	REMOTE IN	I	L	REMOTE INPUT
60	IRQ0	BLK CK	I	H	SUB CODE BLOCK CLOCK SIGNAL
61	P13	STAND BY	O	H	HIGH:STAND BY ON LOW:STAND BY OFF
62	P12	CD MUTE	O	H	HIGH:MUTE ON LOW:MUTE OFF
63	P11	REMOTE OUT	O	L	REMOTE OUTPUT
64	P10	MLD	O	L	COMMAND LOAD SIGNAL LOW:LOAD
65	P05	MCLK	O	P	COMMAND CLOCK SIGNAL
66	P04	SYSTEM SW	I	L	SYSTEM INPUT LOW:SYSTEM
67	P03	MDATA	O	P	COMMAND DATA OUTPUT
68	P02	SQCK	O	P	SUB CODE Q RESISTER CLOCK
69	P01	SUBQ	I	P	SUB CODE Q CODE INPUT
70	P00	LIMIT SW	I	L	LIMIT SW LOW:INSIDE
71	CM	CM	–	–	N.C.
72	SYNC	SYNC	–	–	N.C.
73	VPP	VPP	–	–	FL DRIVE VOLTAGE – 30V
74	P70	TAPE CLOSE	O	H	TAPE TRAY CLOSE
75	P71	TAPE OPEN	O	H	TAPE TRAY OPEN
76	P72	CD CLOSE	O	H	CD TRAY CLOSE
77	P73	CD OPEN	O	H	CD TRAY OPEN
78	P74	TAPE MUTE	O	L	LOW:TAPE MUTE ON HIGH:OFF
79	P75	TAPE HI – SPEED	O	L	LOW:HI – SPEED HIGH:NORMAL – SPEED
80	P76	SOLENOID	O	H	SOLENOID DRIVE
81	P77	CAPSTAN	O	H	CAPSTAN MOTOR DRIVE
82	P80	D7(G8)	O	H	FL DISPLAY DIGIT DRIVE
83	P81	D6(G7)			
84	P82	D5(G6)			

MN662714



PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
1	BCLK	O	NC	43	TES	O	NC
2	LRCK	O	NC	44	PLAY	O	NC
3	SRDATA	O	NC	45	WVEL	O	BC
4	DVDD1	I	+5V FOR DIGITAL	46	ARF	I	RF SIGNAL
5	DVSS1	I	GROUND FOR DIGITAL	47	IREF	I	REFERENCE CURRENT
6	TX	O	DIGITAL AUDIO INTERFACE	48	DRF	I	NC
7	MCLK	I	μ – COM COMMAND CLOCK SIGNAL	49	DSLF	I/O	LOOP FILTER FOR DSL
8	MDATA	I	μ – COM COMMAND DATA SIGNAL	50	PLLF	I/O	LOOP FILTER FOR PLL
9	MLD	I	μ – COM COMMAND LOAD SIGNAL	51	NC3		NC
10	SENSE	O	SENSE SIGNAL	52	VCOF	I/O	LOOP FILTER FOR VCO
11	/FLOCK	O	FOCUS SERVO LOCK SIGNAL	53	AVDD2	I	+5V FOR ANALOG(DSL PLL DA)
12	NC1		NC	54	AVSS2	I	GROUND FOR ANALOG(DSL PLL DA)
13	/TLOCK	O	TRAKING SERVO LOCK SIGNAL	55	EFM	O	EFM SIGNAL
14	BLKCK	O	SUB CODE BLOCK CLOCK SIGNAL	56	PCK	O	PLL CLOCK 4.321MHz
15	SQCK	I	SUB CODE Q RESISTER CLOCK	57	PDO	O	PHASE COMPARATOR FOREFM AND PCK
16	SUBQ	O	SUB CODE Q CODE	58	SUBC	O	NC
17	DMUTE	I	MUTE	59	SBCK	I	NC
18	STAT	O	STAUTUS SIGNAL	60	VSS	I	GROUND FOR OSCILLATOR
19	/RST	I	RESET	61	X1	I	CRYSTAL OSCILLATOR F=33.8688MHz
20	SMCK	O	NC	62	X2	O	CRYSTAL OSCILLATOR F=33.8688MHz
21	PMCK	O	NC	63	VDD	I	+5V SUPPLY VOLTAGE FOR OSCILLATOR
22	TRV	O	TRAVERSE	64	NC4		NC
23	TVD	O	TRAVERSE DRIVE	65	BYTCK	O	NC
24	PC	O	SPINDIE MOTOR ON SIGNAL L:ON	66	/CLDCK	O	NC
25	ECM	O	SPINDIE MOTOR	67	FCLK	O	NC
26	ECS	O	SPINDIE MOTOR DRIVE	68	IPFLAG	O	INTERPOLATION FLAG H:INTERPOLATION
27	KICK	O	KICK PULSE	69	FLAG	O	NC
28	NC2		NC	70	CLVS	O	NC
29	TRD	O	TRACKING DRIVE	71	CRC	O	SUB CODE CRC CHECK H:OK L:NG
30	FOD	O	FOCUS DRIVE	72	DEMPH	O	NC
31	VREF	I	REFERENCE VOLTAGE	73	RESY	O	NC
32	FBAL	O	FOCUS BALANCE ADJ.	74	/RST2	I	RESET FOR MSH L:RESET
33	TBAL	O	TRACKING BALANCE ADJ.	75	/TEST	I	TEST
34	FE	I	FOCUS ERROR SIGNAL	76	AVDD1	I	+5V FOR ANALOG(AUDIO)
35	TE	I	TRACIKNG ERROR SIGNAL	77	OUTL	O	ANALOG L CH
36	RFENV	I	RF ENVELOP	78	AVSS1	I	GROUND FOR ANALOG(AUDIO)
37	VDET	I	VIBRATION DET.	79	OUTR	O	ANALOG R CH
38	OFT	I	OFF TRACK SIGNAL	80	RSEL	I	RF POLARITY SEL.
39	TRCRS	I	TRACK LOSS SIGNAL	81	CSEL	I	H:CSEL=33.8688MHz
40	/FDET	I	RF DETECTOR SIGNAL	82	PSEL	I	TEST
41	BDO	I	DROP – OUT SIGNAL	83	MSEL	I	L:SMCK=4.2336MHz
42	LDON	O	LASER ON SIGNAL	84	SSEL	I	RESY MODE



PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
1	PD	I	APC AMP. (Auto,atic Power Control)	19	ENV	O	3TENV
2	LD	O	APC AMP.	20	VREF	O	VREF
3	LD ON		APC ON/OFF CONTROL	21	LD OFF		APC OFF CONTROL
4	C. CRS		CAP. FOR CROSS	22	VDET	O	VDET
5	VCC		VCC	23	TEBPF	I	VDET
6	RF –	I	RF AMP. INVERTING	24	CROSS	O	CROSS
7	RF OUT	O	RF AMP.	25	TE OUT	O	TE AMP.
8	RF IN	I	AGC	26	TE –	I	TE AMP. INVERTING
9	CAGC		LOOP FILTER FOR AGC	27	FE OUT	O	FE AMP.
10	ARF	O	AGC	28	FE –	I	EF AMP. INVERTING
11	CENV		CAP. FOR RF DET.	29	FBAL		F BAL CONTROL
12	CEA		CAP. FOR HPF – AMP.	30	TBAL		T BAL CONTROL
13	C. SBDO		CAP. FOR RF ENVELOP DARK DET.	31	PDFR		I – V AMP. ADJ.
14	BDO	O	BDO	32	PDER		I – V AMP. ADJ.
15	C. SBRT		CAP. FOR RF ENVELOP BRIGHT DET.	33	PDE	I	I – V AMP. E
16	OFTR	O	OFTR	34	PDF	I	I – V AMP. F
17	RFDET	O	RFDET	35	PDBD	I	I – V AMP. B+D
18	GND		GND	36	PDAC	I	I – V AMP. A+C

9. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R*** : 1) GD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
R*** : 2) GD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W

① —— Resistance value

Examples :

① Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C*** : CERAMIC CAP.

1) DD1x x x x 370, Ceramic capacitor
Disc type
Temp.coeff.P350~N1000,50V
① Capacity value
② Tolerance

Examples

① Tolerance (Capacity deviation)
±0.25pF ... 0
±0.5pF ... 1
±5% ... 5

* Tolerance of COMMON PARTS handled here are as follows :
0.5pF~ 5pF...±0.25pF
6pF~ 10pF...±0.5pF
12pF~ 560pF...±5%

② Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

C*** : CERAMIC CAP.

1) DK16 x x x 300, High dielectric constant ceramic capacitor
① Disc type
Temp.chara. 2B4, 50V
Capacity value

Examples

② Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

C*** : ELECTROLY CAP.(⏚), FILM CAP.(⏤)

1) EA x x x x x x 10, Electrolytic capacitor
One-way lead type, Tolerance ±20%
① ② Working voltage
Capacity value

Examples

① Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...118
		2200μF...228

② Working voltage

6.3V...006	25V...025	
10V...010	35V...035	
16V...016	50V...050	

2) DF15 x x x 350 } Plastic film capacitor
DF15 x x x 310 } One-way type, Mylar ±5% 50V
DF16 x x x 310 Plastic film capacitor
One-way type, Mylar ±10% 50V
①
Capacity value

Examples

① Capacity value

0.001μF(1000pF)...102	0.1μF...104
0.0018μF.....182	0.56μF...564
0.01μF.....103	1μF...105
0.015μF.....153	

NOTE : 1) The above CODES (R***,R***,C***,C*** and (C***) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts(**RI05, DD4, DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;

1. KOA Corporation

Part No.	Type No.	Description
NH05 x x x 140	→ RF25S x x x x Ω J	(±5% 1/4W)
NH05 x x x 120	→ RF50S x x x x Ω J	(±5% 1/2W)
NH85 x x x 110	→ RF73B2A x x x x Ω J	(±5% 1/10W)
NH95 x x x 140	→ RF73B2E x x x x Ω J	(±5% 1/4W)

* Resistance value — Resistance value (0.1-10kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No.	Type No.	Description
NF05 x x x 140	→ ERD-2FCJ x x x	(±5% 1/4W)
RF05 x x x 140		
NF02 x x x 140	→ ERD-2FCG x x x	(±2% 1/4W)
RF02 x x x 140		

* Resistance value — * Resistance value

Examples :

* Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MΩ...475

ABBREVIATION AND MARKS

1	ANT.	: ANTENNA	2	BATT.	: BATTERY
3	CAP.	: CAPACITOR	4	CER.	: CERAMIC
5	CONN.	: CONNECTING	6	DIG.	: DIGITAL
7	HP	: HEADPHONE	8	MIC.	: MICROPHONE
9	μ-PRO	: MICROPROCESSOR	10	REC.	: RECORDING
11	RES.	: RESISTOR	12	SPK	: SPEAKER
13	SW	: SWITCH	14	TRANSF.	: TRANSFORMER
15	TRIM.	: TRIMMING	16	TRS.	: TRANSISTOR
17	VAR.	: VARIABLE	18	X'TAL	: CRYSTAL
19			20		
21			22		
23			24		
25			26		
27			28		
29			30		

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
			PD03-DOLBY NR CIRCUIT BOARD	
			PD03-CAPACITORS	
CK01		4822 124 22696	ELEC 3.3 µF 50V	OA33505020
CK02		4822 124 22696	ELECT 3.3 µF 50V	OA33505020
CK03		4822 124 41543	ELECT 1 µF 50V	OA10505020
CK04		4822 124 41543	ELECT 1 µF 50V	OA10505020
CK05		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
CK06		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
CU03		4822 121 43131	ELECT 33 µF 25V	OA33602520
CW35		4822 124 41543	ELECT 1 µF 50V PF	OA10505020
CW36		4822 124 41543	ELECT 1 µF 50V PF	OA10505020
C601		4822 124 41543	ELECT 1 µF 50V	OA10505020
C602		4822 124 41543	ELECT 1 µF 50V	OA10505020
C605		4822 124 41543	ELECT 1 µF 50V	OA10505020
C606		4822 124 41543	ELECT 1 µF 50V	OA10505020
C613		4822 124 90351	ELECT 0.1 µF 50V	OA10405020
C614		4822 124 90351	ELECT 0.1 µF 50V	OA10405020
C615		4822 124 90351	ELECT 0.1 µF 50V	OA10405020
C616		4822 124 90351	ELECT 0.1 µF 50V	OA10405020
C617		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
C618		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
C619		4822 124 41543	ELECT 1 µF 50V	OA10505020
C620		4822 124 41543	ELECT 1 µF 50V	OA10505020
C621		4822 124 41543	ELECT 1 µF 50V	OA10505020
C622		4822 124 41543	ELECT 1 µF 50V	OA10505020
C623		4822 124 41543	ELECT 1 µF 50V	OA10505020
C624		4822 124 41543	ELECT 1 µF 50V	OA10505020
C625		4822 124 41543	ELECT 1 µF 50V	OA10505020
C627		4822 122 33639	CERAMIC 1000 PF ±10%	DA16102110
C628		4822 126 11125	CERAMIC 10 PF ±5%	DA15100110
C629		4822 126 11125	CERAMIC 10 PF ±5%	DA15100110
C630		4822 124 90364	ELECT 220 µF 16V	OA22701620
			PD03-CAPACITORS (COMMON)	
C***			PLASTIC FILM CAPACITOR ONE WAY TYPE, MYLAR ±5% 50V: C607~C612, C631~C634	
			PD03-RESISTORS	
RJ13		4822 100 20681	TRIMMING 2.2KΩ P.B. LEVEL	RA02220780
RJ16		4822 100 20681	TRIMMING 2.2KΩ P.B. LEVEL	RA02220780
RK01		4822 100 11351	TRIMMING 10KΩ REC LEVEL	RA01030780
RK02		4822 100 11351	TRIMMING 10KΩ REC LEVEL	RA01030780
			PD03-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RJ14, RJ15, RJ17, RJ18, RK03~RK12, RK21~RK26, RK31~RK36, RK41~RK44, RK45, RK46, RK51~RK56, RK61~RK66, RK71~RK76, R601~R622, R630~R634	
			PD03-SEMICONDUCTORS	
D601		4822 130 80091	ZENER DIODE 12V ZENER EQUIVALENT	HD31201000
Q601		4822 209 32748	IC HA12155NT	HC10101010
QJ03		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QJ04		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QJ05		4822 130 60766	DIGITAL TRANSISTOR DTA114ES/UN4111	BA10001000
QK01		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QK02		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
			PD03-MISCELLANEOUS	
J601			PLUG S10B-XH-A	YP06006460
J602			PLUG S10B-XH-A	YP06006460
J603			PLUG B10B-EH	YP06012300
			PD16-CD CIRCUIT BOARD	
			PD16-CAPACITORS [CHIP]	
CM01		4822 126 11566	CERAMIC 2200 PF ±10%	DK96222300
CM02		4822 126 12495	CERAMIC 1500 PF ±10%	DK96152300
CM03		4822 126 11567	CERAMIC 0.022 µF ±10% 16V	DK96223200
CM05		4822 126 13394	CERAMIC 0.018 µF ±10% 25V	DK96183200
CM06		4822 124 41842	TANTL. 47 µF ±20% 16V	EY47601620
CM07		4822 124 41842	TANTL. 47 µF ±20% 16V	EY47601620
CM08		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
CM09		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
CM10		4822 126 11567	CERAMIC 0.022 µF ±10% 16V	DK96223200
CM11		4822 126 11567	CERAMIC 0.022 µF ±10% 16V	DK96223200
CM12			FILM 0.1 µF ±5%	DF15104310
CM13		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C101		4822 122 33741	CERAMIC 10P CH ±0.5%	DD91100300
C102		4822 126 11678	CERAMIC 1 µF ±0.5%	DK58105200
C103		4822 126 11678	CERAMIC 1 µF ±0.5%	DK58105200
C104		4822 122 33744	CERAMIC 100 PF ±0.5%	DD95101300
C105		4822 125 60204	CERAMIC 0.027 µF ±10% R 16V	DK96273200
C106		4822 126 11702	CERAMIC 680 PF ±10%	DK96681300
C107		5322 126 11579	CERAMIC 3300 PF ±10%	DK96332300
C108		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C109		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C110		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C111		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C112		4822 126 13396	CERAMIC 0.047 µF ±10%	DK9647320R
C113		4822 126 11685	CERAMIC 4700 PF ±10%	DK96472300
C114		5322 126 11583	CERAMIC 0.01 µF ±10%	DK96103200
C115		5322 126 11583	CERAMIC 0.01 µF ±10%	DK96103200
C116		4822 125 60204	CERAMIC 0.027 µF ±10% R 16V	DK96273200
C117		4822 126 11678	CERAMIC 1 µF +80%-20%	DK58105200
C118		4822 122 33782	CERAMIC 56P CG ±5%	DD95560300
C119		4822 122 33744	CERAMIC 100P CG ±5%	DD95101300
C120		4822 126 11678	CERAMIC 1 µF +80%-20%	DK58105200
C121		4822 126 13395	CERAMIC 390P ±10%	DK96391300
C122		4822 126 11695	CERAMIC 330PF ±5% CG	DD95331300
C123		4822 124 11074	TANTL 10 µF ±0.25 16V	EY10601620
C124		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C125		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C126		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C127		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C128		4822 126 13395	CERAMIC 390P ±10%	DK96391300
C501		4822 126 11702	CERAMIC 680 PF ±10%	DK96681300
C502		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C503		4822 126 13302	CERAMIC 8200 PF ±10%	DK96822200
C504		4822 126 13281	CERAMIC 0.33 µF ±10% 16V	DK56334200
C505		4822 126 13281	CERAMIC 0.33 µF ±10% 16V	DK56334200
C506		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C507		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C508		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C509		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C510		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C511		4822 122 33777	CERAMIC 47 PF ±5%	DD95470300
C512		4822 126 11661	CERAMIC 5 PF ±0.25%	DD90050300
C513		4822 126 11661	CERAMIC 5 PF ±0.25%	DD90050300
C514		4822 124 10772	TANTL. 100 µF ±0.25 6.3V	EY10700620
C515		4822 126 11687	CERAMIC 0.1 µF +80%-20%	DK98104200
C651		4822 122 33751	CERAMIC 120 PF ±5%	DD95121300
C652		4822 122 33751	CERAMIC 120 PF ±5%	DD95121300
C657		4822 122 33777	CERAMIC 47 PF ±5%	DD95470300
C658		4822 122 33777	CERAMIC 47 PF ±5%	DD95470300
C659		4822 122 33777	CERAMIC 47 PF ±5%	DD95470300
C660		4822 122 33777	CERAMIC 47 PF ±5%	DD95470300
C661		4822 123 30409	MICA 470 PF ±5%	DF95471040
C662		4822 123 30409	MICA 470 PF ±5%	DF95471040
C663		4822 124 41842	TANTL 47 µF ±20% 16V	EY47601620
C664		4822 124 41842	TANTL. 47 µF ±20% 16V	EY47601620
C665		4822 124 41842	TANTL 47 µF ±20% 16V	EY47601620
C666		4822 124 41842	TANTL 47 µF ±20% 16V	EY47601620
			PD16-CAPACITOR (COMMON)	
C***			PLASTIC FILM CAPACITOR ONE WAY TYPE, MYLAR ±5% 50V: CM12	
			PD16-RESISTORS [CHIP]	
RM01		4822 051 30103	10KΩ ±5% 1/16W	RN05103610
RM02		4822 051 30103	10KΩ ±5% 1/16W	RN05103610
RM03		4822 051 30474	470KΩ ±5% 1/16W	RN05474610
RM04		4822 051 30153	15KΩ ±5% 1/16W	RN05153610
RM05		4822 116 83212	18KΩ ±5% 1/16W	RN05183610

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
RM06		4822 116 83219	820Ω ±5% 1/16W	NN05821610
RM07		4822 051 30392	3.9KΩ ±5% 1/16W	NN05392610
RM08		4822 116 83216	56KΩ ±5% 1/16W	NN05563610
RM09		4822 116 83212	18KΩ ±5% 1/16W	NN05183610
RM10		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
RM11		4822 051 30683	68KΩ ±5% 1/16W	NN05683610
RM12		4822 051 30101	100Ω ±5% 1/16W	NN05101610
RM13		4822 051 30229	22Ω ±5% 1/16W	NN05220610
RM14		4822 051 30101	100Ω ±5% 1/16W	NN05101610
⚠RM16		4822 209 62941	IC, 78M08	HC38508090
RM17		4822 051 30229	22Ω ±5% 1/16W	NN05220610
R101		4822 116 83221	8.2KΩ ±5% 1/16W	NN05822610
R102		4822 051 30153	15KΩ ± 5% 1/16W	NN05153610
R103		4822 051 30221	220Ω ± 5% 1/16W	NN05221610
R104		4822 051 30684	680Ω ± 5% 1/16W	NN05681610
R105		4822 051 30104	100KΩ ±5% 1/16W	NN05104610
R106		4822 051 30104	100KΩ ±5% 1/16W	NN05104610
R107		4822 116 83214	39KΩ ±5% 1/16W	NN05393610
R108		4822 051 30154	150KΩ ± 5% 1/16W	NN05154610
R109		4822 116 83222	82KΩ ±5% 1/16W	NN05823610
R110		4822 051 30334	330KΩ ±5% 1/16W	NN05334610
R111		4822 051 30334	330KΩ ±5% 1/16W	NN05334610
R112		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R113		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R114		4822 051 30272	2.7KΩ ± 5% 1/16W	NN05272610
R115		4822 116 83211	1.8KΩ ±5% 1/16W	NN05182610
⚠R116		4822 111 90967	FUSE 4.7Ω ±5% 1/4W	NF05047140
R117		4822 116 83221	8.2KΩ ±5% 1/16W	NN05822610
R118		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R119			3.3KΩ ±5% 1/16W	NN05332610
R120		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
R121		4822 051 30684	680Ω ±5% 1/16W	NN05681610
R122		4822 051 30472	4.7KΩ ±5% 1/16W	NN05472610
R123		4822 051 30224	220KΩ ±5% 1/16W	NN05224610
R124		4822 116 83222	82KΩ ±5% 1/16W	NN05823610
R125		4822 051 30683	68KΩ ±5% 1/16W	NN05683610
R126		4822 051 30222	2.2KΩ ±5% 1/16W	NN05222610
R127		4822 051 30272	2.7KΩ ±5% 1/16W	NN05272610
R128		4822 051 30151	150Ω ±5% 1/16W	NN05151610
R129		4822 051 30151	150Ω ±5% 1/16W	NN05151610
⚠R130		4822 111 90967	FUSE 4.7Ω ±5% 1/4W	NF05047140
R131		4822 051 30008	0Ω	NN05000610
R501		4822 116 83222	82KΩ ±5% 1/16W	NN05823610
R502		4822 051 30154	150KΩ ±5% 1/16W	NN05154610
R504			1.2MΩ ±5% 1/16W	NN05125610
R505		4822 051 30684	680Ω ±5% 1/16W	NN05681610
R506		4822 051 30684	680Ω ±5% 1/16W	NN05681610
R507		4822 051 30101	100Ω ±5% 1/16W	NN05101610
R508		4822 051 30472	4.7KΩ ±5% 1/16W	NN05472610
R509		4822 051 30334	330KΩ ±5% 1/16W	NN05334610
R510		4822 116 83214	39KΩ ±5% 1/16W	NN05393610
R511		4822 051 30008	0Ω	NN05000610
R512		4822 051 30008	0Ω	NN05000610
R513		4822 051 30008	0Ω	NN05000610
R651		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R652		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R653		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R654		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R659		4822 051 30333	33KΩ ±5% 1/16W	NN05333610
R660		4822 051 30333	33KΩ ±5% 1/16W	NN05333610
R661		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R662		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R663		4822 116 83212	18KΩ ±5% 1/16W	NN05183610
R664		4822 116 83212	18KΩ ±5% 1/16W	NN05183610
R665		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R666		4822 051 30103	10KΩ ±5% 1/16W	NN05103610
R667		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
R668		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
R669		4822 051 30333	33KΩ ±5% 1/16W	NN05333610
R670		4822 051 30333	33KΩ ±5% 1/16W	NN05333610
R671		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
R672		4822 051 30223	22KΩ ±5% 1/16W	NN05223610
R***			**PD16-RESISTORS (COMMON)** CARBON FILM FIXED RESISTOR, ±5% 1/6W: RM15	

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
			PD16-SEMICONDUCTORS [SMD]	
QM01		4822 209 33816	IC, 4CH DRIVER AN8389S	HC10149020
Q101		4822 209 33815	IC, HEAD AMP AN8805SB	HC10148020
Q102		4822 130 63601	TRANSISTOR 2SC4213	HX342132A0
Q103		4822 130 61541	TRANSISTOR 2SC4116	HX341162B0
Q104		4822 130 61541	TRANSISTOR 2SC4116	HX341162B0
Q105		4822 130 63609	TRANSISTOR 2SA1588(Y)	HX115881A0
Q106		4822 130 61541	TRANSISTOR 2SC4116	HX341162B0
Q107		4822 130 61541	TRANSISTOR 2SC4116	HX341162B0
Q501		4822 209 33817	IC, DSP/DAC MN662714	HC10150020
Q651		4822 209 71451	IC, NJM4558M(Y)	HC10011090
Q652		4822 209 71451	IC, NJM4558M(Y	HC10011090
⚠RM16		4822 209 62941	IC, 78M08	HC38508090
			PD16-MISCELLANEOUS	
JM01			PLUG, S6B-XH FOR CDM12	YP06006290
JM02			PLUG, 7P	YP06007170
J101		4822 265 41349	JACK, 12P TOC-L12X FOR PIC	YJ07007950
J501			JACK, 15P 1.25PITCH 9603S-15F	YJ07009170
J502			PLUG, 2P	YP06007120
J601			PLUG, 4 UP W-P7904 FOR LINE OUT	YP06007140
L501			FERRITE CORE, BLM31A02	FC90030070
WU03			JUMPER LEAD, J501	YU15080530
X501		4822 242 81864	CRYSTAL 33.8688MHZ	JX33001350
			PG03-CONNECTOR CIRCUIT BOARD	
			PG03-CAPACITORS	
CW32		4822 124 22698	ELECT 47 µF 25V	OA47602520
CW33		4822 124 22698	ELECT 47 µF 25V	OA47602520
			PJ03-P.B AMP/HXPRO/ BIAS OSC CIRCUIT BOARD	
			PJ03-CAPACITORS	
CJ01		4822 126 11127	CERAMIC 470 PF ±10%	DA16471110
CJ02		4822 126 11127	CERAMIC 470 PF ±10%	DA16471110
CJ03		4822 124 90354	ELECT 100 µF 16V	OA10701620
CJ04		4822 124 90354	ELECT 100 µF 16V	OA10701620
CJ07		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
CJ08		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
CJ10		4822 124 90364	ELECT 220 µF 50V	OA22701620
CJ11		4822 124 90354	ELECT 100 µF 16V	OA10701620
CK07		4822 122 33639	CERAMIC 1000 PF ±10%	DA16102110
CK08		4822 122 33639	CERAMIC 1000 PF ±10%	DA16102110
CK09		4822 122 31211	CERAMIC 100 PF ±10%	DK16101550
CK10		4822 122 31211	CERAMIC 100 PF ±10%	DK16101550
CL03		4822 124 41539	ELECT 47 µF 16V	OA47601620
CL04		4822 121 43774	FILM 0.012 µF ±10% 250V	DF76123530
CL05		4822 124 22698	ELECT 47 µF 25V	OA47602520
CS01		4822 124 22274	ELECT 4.7 µF 50V	OA47505020
C903		4822 126 10409	CERAMIC 560 PF ±10%	DA16561110
C904		4822 126 10409	CERAMIC 560 PF ±10%	DA16561110
C907		4822 126 10364	CERAMIC 100 PF ±10%	DA16101110
C908		4822 126 10364	CERAMIC 100 PF ±10%	DA16101110
C911		4822 121 43775	FILM 560 PF ±10% 250V	DF76561530
C912		4822 121 43775	FILM 560 PF ±10% 250V	DF76561530
C913		4822 122 40588	CERAMIC 0.022 µF ±20%	DA17223110
C914		4822 122 40588	CERAMIC 0.022 µF ±20%	DA17223110
C915		4822 124 41539	ELECT 47 µF 16V	OA47601620
C916		4822 126 11557	CERAMIC 4.7 PF ±10%	DA16047120
C917		4822 124 90364	ELECT 220 µF 50V	OA22701620
C***			**PJ03-CAPACITORS (COMMON)** PLASTIC FILM CAPACITOR ONE WAY TYPE, MYLAR ±5% 50V: CJ05, CJ06, CL01, CL02, C901, C902, C905, C906, C909, C910	

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
			PJ03-RESISTORS	
RL02		4822 050 23308	3.3Ω ±5%1/4W	GG05033140
⚠RL03		4822 113 90119	FUSE 22Ω ±2% 1/4W	NF02220140
R901		4822 100 11373	TRIMMING 4.7KΩ BIAS	RA04720780
R902		4822 100 11373	TRIMMING 4.7KΩ BIAS	RA04720780
			PJ03-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RJ01-RJ12, RJ20, RK13-RK17, RK80, RK81,RL01, RL04-RL06, RS01-RS03, , R903-R907, U065, U192	
			PJ03-SEMICONDUCTORS	
DS01		4822 130 33305	DIODE, 1SS176,MA165,1SS254 30V 0.1A	HD20002000
QJ01		4822 209 62249	IC, DUAL PB-EQ AMP CXA1115BP	HC10022250
QJ02		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QK03		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QL01		4822 130 61886	TRANSISTOR 2SD1292 Q OR R	HT412922A0
QL02		4822 130 61886	TRANSISTOR 2SD1292 Q OR R	HT412922A0
QL05		4822 130 60588	DIGITAL TRANSISTOR DTC114ES	BA20010210
QS01		4822 209 61667	IC, HEAD SWITCH μPC1330HA	HC10206060
QS02		4822 130 60588	DIGITAL TRANSISTOR DTC114ES/UN4211	BA20001000
Q901		4822 209 72874	IC, DOLBY HX-PRO μPC1297CA	HC10200060
			PJ03-MISCELLAEOUS	
JJ51			JACK, B8B-PH-K-S 8P	YJ06006280
LK01		4822 157 53521	CHOKE COIL TL-8 223J	LC22260710
LK02		4822 157 53521	CHOKE COIL TL-8 223J	LC22260710
LL01		4822 148 81358	OSC TRANSF. BIAS OSC COIL	TC10140410
L901		4822 157 60436	OSC TRANSF. MX-PRO COIL 105KHZ	TC10100130
L902		4822 157 60436	OSC TRANSF. HX-PRO COIL 105KHZ	TC10100130
WB01			CONNECTIVE CORD, 10P	YB00081430
			PK03-KEY CIRCUIT BOARD	
			PK03-RESISTOR (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RU51	
			PK03-MISCELLANOUES	
JU04			PLUG, 2P	YP06006620
SU51		4822 276 20508	PUSH SWITCH, TACT SWICH	SP01011280
			PP03-KEY CIRCUIT BOARD	
			PP03-RESISTOR (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RU52-RU56	
			PP03-MISCELLANEOUS	
SU52 ~ SU56		4822 276 20508	PUSH SWITCH, TACT SWICH	SP01011280
SU58		4822 276 20508	PUSH SWITCH, TACT SWICH	SP01011280
WK01			CONNECTIVE CORD, 2P	YB00051120
WK02			CONNECTIVE CORD, 2P	YB00051120
			PS03-FL/REMOTE/KEY CIRCUIT BOARD	
			PS03-CAPACITOR	
CR02		4822 124 90352	ELECT 10 μF ±20% 16V	OA10601620

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
			PS03-RESISTOR (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RU08, RU09, RU50, RU57-RU64	
			PS03-SEMICONDUCTOR	
QR03		4822 130 83519	PHOTO UNIT IR RECIVER RPM-G70CBR	HW10001210
			PS03-MISCELLANOUES	
JU02			PLUG, 6P	YP06006660
JU03			PLUG, 2P	YP06006620
JU10			JACK, 1.0PITCH 29P	YJ07009470
SS01		4822 277 21767	SLIDE SWITCH,TIMER SW SSSF01 1-3	SS01030290
SU57		4822 276 20508	PUSH SWITCH, TACT SWICH	SP01011280
SU59 ~ SU64		4822 276 20508	PUSH SWITCH, TACT SWICH	SP01011280
VU01		4822 130 91417	DISPLAY UNIT, FL F1P8CM5R	HQ30811060
WU01			JUMPER LEAD 1.0PITCH SUMI CARD 29P 80MM	YU29080503
			PU03-POWER/μ-CON/MECHA DRIVE CIRCUIT BOARD	
			PU03-CAPACITORS	
CD01		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
CM20	DC1020	4822 124 90354	ELECT 100 μF 16V	OA10701620
CM21	DC1020	4822 124 22571	ELECT 10 μF 50V	OA10605020
CM22	DC1020	4822 124 22698	ELECT 47 μF 25V	OA47602520
CM23	DC1020	4822 126 10408	CERAMIC 220PF ±10%	DA16221110
CM24	DC1020	4822 124 22571	ELECT 10 μF 50V	OA10605020
CM26	DC1020	4822 126 10364	CERAMIC 100PF ±10%	DA16101110
CM40	DC1020	4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CM41	DC1020	4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CM51		4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CM52		4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CM55		4822 124 22273	ELECT 0.47 μF 50V	OA47405020
CM56		4822 124 22273	ELECT 0.47 μF 50V	OA47405020
CM80		4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CM81		4822 122 40588	CERAMIC 0.022 μF ±20%	DA17223110
CR01		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
CU01		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
CU02	DC1020	4822 124 90361	ELECT 22 μF 25V	OA22602520
CU30		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
CW01		4822 122 33639	CERAMIC 1000 PF ±10%	DA16102110
CW02		4822 122 33639	CERAMIC 1000 PF ±10%	DA16102110
CW03		4822 124 22698	ELECT 47 μF 25V	OA47602520
CW04		4822 124 22698	ELECT 47 μF 25V	OA47602520
CW07		4822 126 10364	CERAMIC 100 PF ±10%	DA16101110
CW08		4822 126 10364	CERAMIC 100 PF ±10%	DA16101110
CW20		4822 124 90354	ELECT 100 μF 16V	OA10701620
CW21		4822 126 10408	CERAMIC 220 PF ±10%	DA16221110
CW22		4822 126 10408	CERAMIC 220 PF ±10%	DA16221110
CW23		4822 124 22274	ELECT 4.7 μF 50V	OA47505020
CW24		4822 124 22274	ELECT 4.7 μF 50V	OA47505020
CW25		4822 124 22274	ELECT 4.7 μF 50V	OA47505020
CW26		4822 124 22274	ELECT 4.7 μF 50V	OA47505020
CW30		4822 124 22698	ELECT 47 μF 25V	OA47602520
CW31		4822 124 22698	ELECT 47 μF 25V	OA47602520
C801		4822 122 30103	CERAMIC 0.022 μF +80%-20% 50V	DK18223310
C802		4822 122 30103	CERAMIC 0.022 μF +80%-20% 50V	DK18223310
C803		4822 122 30103	CERAMIC 0.022 μF +80%-20% 50V	DK18223310
C804		4822 122 30103	CERAMIC 0.022 μF +80%-20% 50V	DK18223310
C807		4822 124 22571	ELECT 10 μF 50V	OA10605020
C808		4822 124 22698	ELECT 47 μF 25V	OA47602520
C809		4822 124 22276	ELECT 47 μF 50V	OA47605020
C810		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
C811		4822 122 40617	CERAMIC 0.1 μF +80%-20% 50V	DD38104010
C812		4822 124 22722	ELECT 1000 μF 16V	OA10801620

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
C813		4822 124 80997	ELECT, LARGE CAP. 0.047F 5.5V	EX47300540
C816		4822 124 22571	ELECT 10 µF 50V	OA10605020
C817		4822 124 41537	ELECT 220 µF 6.3V	OA22700620
C850		4822 124 22571	ELECT 10 µF 50V	OA10605020
C852		4822 124 22696	ELECT 3.3 µF 50V	OA33505020
C853		4822 124 22571	ELECT 10 µF 50V	OA10605020
C854		4822 124 41543	ELECT 1 µF 50V	OA10505020
C856		4822 124 41543	ELECT 1 µF 50V	OA10505020
			PU03-CAPACITORS (COMMON)	
C***			PLASTIC FILM CAPACITOR ONE WAY TYPE MYLAR ±5% 50V: C805, C806, C818,	
			PU03-RESISTORS	
⚠RM50		4822 116 60314	10Ω 5% 1/4W	NH05100140
RM51		4822 100 20681	TRIMMING 2.2KΩ Hi-SPEED	RA02220780
RM53		4822 100 11386	TRIMMING 1KΩ N-SPEED	RA01020780
⚠RM83		4822 116 60314	10Ω ±5% 1/4W	NH05100140
⚠R801		4822 116 60306	1Ω ±5% 1/2W	NH05010120
⚠R802		4822 116 60307	1Ω ±5% 1/4W	NH05010140
⚠R803		4822 116 60306	1Ω ±5% 1/2W	NH05010120
⚠R804		4822 113 90107	4.7Ω ±5% 1/4W	NH05047140
⚠R807		4822 116 60307	1Ω ±5% 1/4W	NH05010140
⚠R859		4822 116 60318	22Ω ±5% 1/4W	NH05220140
⚠R870		4822 116 60307	1Ω ±5% 1/4W	NH05010140
			PU03-RESISTOR (COMMON)	
R***			CARBON FILM FIXED RESISTOR, ±5% 1/6W: RL07, RM20~RM29 [DC1020], RM35, RM36, RM40, RM41, RM52,RM75, RM59, RM61~RM68, RM70, RM71, RM80, RM81, RR01~RR07, RU20~RU27, RU29, RU32~RU36, RU37, RU38 [DC1020], RU41~RU48, RU70~RU76, RU80~RU85, RW05, RW07~RW09, RW12~RW17, RW20, RW21, RW24~RWRW40, RW42, RW43, R806, R832~R834, R851~R858, R860, U013	
			PU03-SEMICONDUCTORS	
DM02	DC1020	4822 130 82609	ZENER DIODE MTZJ2.0B	HD30201000
DM20	DC1020	4822 130 80326	L.E.D., RED LT3D8B	HI10062320
DM22	DC1020	4822 130 80839	DIODE, S5688GVRM=400V IO=1A	HD20029050
DM40 ~ DM42		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	H D20002000
DM52		4822 130 80272	ZENER DIODE, 04AZ7.5, MTZJ7.5C, RD7.5ES	HD30751000
DM80		4822 130 80317	ZENER DIODE, 04AZ5.1, MTZ5.1B, RD5.1ES	HD30511000
DR01 ~ DR05		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
DU10		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
DU11		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
DW01		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
DW02		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
⚠D801		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D802		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D803		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D804		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D805		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D806		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D807		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D808		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D809		4822 130 80839	DIODE, S5688G VRM=400V	HD20029050
⚠D810		4822 130 80839	DIODE, S5688G VRM=400V	HD20029050
D812		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
⚠D814		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000
⚠D815		4822 130 32508	DIODE, RL103E(RECTRON)/DSF10C	HD20003000

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
⚠D816		4822 130 80839	DIODE, S5688G VRM-400V I01A	HD20029050
⚠D817		4822 130 80839	DIODE, S5688G VRM=400V I01A	HD20029050
D832		4822 130 83142	ZENER DIODE, 04AZ6.2	HD30621000
D850		4822 130 80839	DIODE, S5688G VRM=400V I0=1A	HD20029050
D851		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
D852		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
D853		4822 130 80317	ZENER DIODE, 04AZ5.1, MTZJ5.1B, RD5.1ES	HD30511000
D855 ~ D860		4822 130 33305	DIODE, 1SS176, MA165,1SS254 30V 0.1A	HD20002000
D861		4822 130 33305	ZENER DIODE, 04AZ16, MTZJ16C, RD16ES	HD31601000
D862		4822 130 33305	DIODE, 1SS176, MA165, 1SS254 30V 0.1A	HD20002000
D863		4822 130 33305	DIODE, 1SS176, MA165, 1SS254 30V 0.1A	HD20002000
QM07	DC1020	4822 209 30193	IC, LB1641 MOTORDRIVER	HC10279030
QM20	DC1010	4822 209 61187	IC, BA15218	HC10089210
QM20	DC1020	4822 209 83684	IC, OP-AMP NJM072D	HC10032090
QM21	DC1020	4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QM22	DC1020	4822 130 60766	DIGITAL TRANSISTOR DTA114ES	BA10007210
QM51		4822 130 61725	TRANSISTOR 2SD2010	HT42010000
QM52		4822 130 61725	TRANSISTOR 2SD2010	HT42010000
QM53		4822 130 42842	F.E.T. 2SK372 (GR,BL)	HF203722A0
QM55		4822 130 60588	DIGITAL TRANSISTOR DTC114ES/UN4211	BA20001000
QM56		4822 130 60588	DIGITAL TRANSISTOR DTC114ES/UN4211	BA20001000
QM57		4822 209 30193	IC, MOTOR DRIVER LB1641	HC10279030
QM58		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QM80		4822 209 30193	IC, MOTOR DRIVER LB1641	HC10279030
QR01		4822 130 42715	TRANSISTOR, A608SP,A1048,A1309, A933S	HT10001000
QR02		4822 130 42298	TRANSISTOR, C536SP,C2458,C331, C1740S	HT30001000
QU01		4822 209 33824	MAIN-µCOM, MN1873216	HU294KA000
QU10		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QU30			IC, 74HC4094	HC709449B0
QU31		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QU32		4822 130 60766	DIGITAL TRANSISTOR DTA114ES	BA10007210
QU33		4822 209 61187	IC, BA15218	HC10089210
QU34	DC1020	4822 130 60766	DIGITAL TRANSISTOR DTA114ES	BA10007210
QU35		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QU36		4822 130 63211	DIGITAL TRANSISTOR DTA114TS	BA10003210
QU40	DC1020	4822 130 60588	DIGITAL TRANSISTOR DTC114ES	BA20010210
QU41	DC1020	4822 130 42682	DIGITAL TRANSISTOR DTA144ES/UN4113	BA10002000
QU42	DC1020	4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
QW01		4822 209 83804	IC, LC4966	HC10150030
QW02		4822 209 83804	IC, LC4966	HC10150030
QW03		4822 209 83804	IC, LC4966	HC10150030
QW05		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW06		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW07		4822 130 60766	DIGITAL TRANSISTOR DTA114ES/UN4111	BA10001000
QW09		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW10		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW11		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW12		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW13		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QW14		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QW15		4822 130 42594	DIGITAL TRANSISTOR DTC144ES	BA20012210
QW20		4822 209 61187	IC, BA15218	HC10089210
QW30		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
QW31		4822 130 61723	DIGITAL TRANSISTOR DTC323TS	BA20028210
⚠Q801		4822 209 33821	IC, PQ15RF2 2A,15V	HC36915320
⚠Q802		4822 209 61847	IC, NJM7805FA	HC38505090
⚠Q804		4822 209 83819	IC NJM78L06, 0.1A 6V	HC38106090
Q805		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
Q850		4822 130 60766	DIGITAL TRANSISTOR DTA114ES/UN4111	BA10001000
Q851		4822 130 60588	DIGITAL TRANSISTOR DTC114ES	BA20010210
Q852		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210

[VERS. :VERSION, U:U.S.A, F:Japan, K:Far East, /XX:Europe]

POS. NO.	VERS. COLOR	PART NO. (For EUROPE)	DESCRIPTION	PART NO. (For U/K/F)
Q853		4822 130 42682	DIGITAL TRANSISTOR DTA144ES/UN4113	BA10002000
Q854		4822 130 63211	DIGITAL TRANSISTOR DTA114TS	BA10003210
Q855		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
Q856		4822 130 60766	DIGITAL TRANSISTOR DTA114ES/UN4111	BA10001000
Q857		4822 130 42715	TRANSISTOR, A608SP.A1048 A1309. A4933S	HT10001000
Q858		4822 130 63211	DIGITAL TRANSISTOR DTA114TS	BA10003210
Q859		4822 130 61189	DIGITAL TRANSISTOR DTC114TS	BA20017210
Q860		4822 130 42125	TRANSISTOR 2SD1302 S.T	HT413022B0
			PU03-MISCELLANOUES	
042B			FL HOLDER SP	461T271020
043B		4822 459 11158	STICKER FL ADHESIVE TAPE	056J122010
JD01			JACK, 15P	YJ07008800
JD02			PLUG, 5P	YP06010450
JD03			PLUG, 7P	YP06006670
JD04			PLUG, 4P	YP06007140
JD05			PLUG, 2P	YP06006620
JM01	DC1020		PLUG, 6P	YP06006660
JM02			JACK, 15P	YJ06006350
JM20	DC1020		PLUG, 3P	YP06006930
JM57			PLUG, 6P	YP06006660
JR01		4822 267 41009	TERMINAL, 2P RCA PIN JACK	YT02020890
JR02		4822 267 31369	JACK, OPTICAL OUT GP1F32T	YJ15000090
JU01			JACK, 1.0PITCH 29P 9610S-29A	YJ07009460
JU05			PLUG, 6P	YP06006660
JW01			TERMINAL 6P RCA PIN JACK	YT02060460
⚠J091	/1	4822 277 21763	SLIDE SWITCH, SDKAG 4	SS02021240
J604			JACK, 10JQ-BT10P (TATE)	YJ06008800
J605			JACK, 10JQ-BT10P (TATE)	YJ06008800
J801			PLUG, 2P	YP04000760
L601		4822 157 52461	M.P.X. COIL	LS10440060
L602		4822 157 52461	M.P.X. COIL	LS10440060
⚠L801	/1	4822 146 21748	POWER TRANSF. 115V/230V	TS15426030
⚠L801	F/U		POWER TRANSF. 100V/120V	TS15426010
⚠L801	/2	4822 146 21747	POWER TRANSF. 220V/230V/240V	TS15426020
⚠L801	K		POWER TRANSF. 110V,220V	TS15426040
⚠L802		4822 157 70419	NOISE FILTER (EMI) LF-4D-102	FN01020020
L803			FERRITE CORE ZBF503AR-00 (TA)	FC90050090
L804			FERRITE CORE ZBF503AR-00 (TA)	FC90050090
SR01		4822 277 21768	SLIDE SWITC	SS02030640
TM51		4822 276 20508	PUSH SWITCH, TACT SWICH ADJ.	SP01011280
XU01		4822 242 81863	CERAMIC RESONATOR, 8.38MHZ	FQ08384020